An Historical Overview of the Owikeno Lake (Rivers Inlet, Statistical Area 9) Fall Sockeye Salmon Escapement Surveys 1971-1987

B.L. Thomson, S.K. Bachen and R.D. Goruk

Department of Fisheries and Oceans
Fisheries Branch
Prince Rupert, B.C. V8J 1G8

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AN HISTORICAL OVERVIEW

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OWIKENO LAKE (RIVERS INLET, STATISTICAL AREA 9)

FALL SOCKEYE SALMON ESCAPEMENT SURVEYS

1971-1987

by

B. L. Thomson, S. K. Bachen and R. D. Goruk

Department of Fisheries and Oceans
Prince Rupert, B.C. V8J 1G8

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ABSTRACT

Thomson, B.L., S.K. Bachen and R.D. Goruk. 1988. An historical overview of the Owikeno Lake (Rivers Inlet, Statistical Area 9) fall sockeye salmon escapement surveys, 1971-1987. Can. Data Rep. Fish. Aquat. Sci. 711. iii + 69 p. + Appendices.

The sockeye salmon runs to Rivers Inlet spawn in the Owikeno Lake system (Canadian Department of Fisheries and Oceans, Statistical Area 9). Since the 1970's, a fall field program has been conducted to enumerate the sockeye escapement to the Owikeno Lake tributaries. Representatives from the commercial fishing sector accompany department staff in the spawning assessment. This report summarizes the fall enumeration surveys conducted over the years 1971-1987. A description of Owikeno Lake and its tributaries is included.

RESUME

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Les saumons rouges qui reviennent dans l'inlet Rivers frayent dans le réseau du lac Owikeno (Pêches et Océans Canada, zone statistique 9). Depuis les années 1970, un programme local a été mené à l'automne afin de dénombrer l'échappée de saumons rouges vers les tributaires du lac Owikeno. Des représentants du secteur de la pêche commerciale ont accompagné le personnel du Ministère lors des évaluations des reproducteurs. Le présent rapport résume les relevés effectués à l'automne pendant la période de 1971 à 1987. Le lac Owikeno et ses tributaires sont également décrits.

INTRODUCTION

The Owikeno Lake system supports the sockeye salmon (Oncorhynchus nerka) runs harvested by the Rivers Inlet (Department of Fisheries and Oceans, Statistical Area 9) commercial salmon fishery. The fishery is held at the mouth and lower reaches of Rivers Inlet. The sockeye are present in the inlet from July-August, with numbers peaking in mid-late July. The sockeye fishery is managed to a target escapement of 1,010,000 sockeye to the Owikeno Lake system. During July, the sockeye escapement past the commercial fishery is monitored by a nightly echosounding program. The results from this survey are used along with the commercial catch per unit effort as an index of the relative strength of the incoming sockeye run in the in-season management process.

Annually, the Owikeno Lake sockeye escapement is enumerated in a field program operated from September to October. Individual stream systems are visited at regular intervals to estimate escapement numbers and to evaluate spawning success. In the last week of the program, the field camp is opened to members from Industry and other DFO groups. At this time, the final stream inspections are made by all individuals. The aim of this program is to increase Industry's appreciation of fisheries management by involving their representatives in the final assessment of the spawning resource.

This report presents an historical summary of the fall sockeye surveys conducted on the Owikeno Lake system during the years 1971-1987.

The report is organized into five sections. Part I describes Owikeno Lake and its tributaries, detailing their physical and biological characteristics. Descriptions of the eleven main streams contributing to the lake system have been taken from the unpublished manuscript:

> McIvor, E. 1978. Catalogue of fish and stream resources of Area 9 (preliminary).

Part II presents a descriptive summary of the field season for the years 1983-1987. Annual sockeye survey results have been extracted from field season summaries on file with the Regional Department of Fisheries and Oceans office in Prince Rupert. These are presented for the years 1971-1987 in tabular form by stream and date in Part III. The data are presented in a reversed chronological order. Part IV lists the estimated age of spawners by stream and year. Ages have been determined from scale and otilith samples taken during the escapement surveys. The last section (Part V) shows the daily water levels recorded at the Genesee Camp during the survey periods.

PART I

A general description of Owikeno Lake and its tributaries follows below:

OWIKENO LAKE

Statistical Area 9 is made up by Rivers Inlet and Owikeno Lake. Owikeno Lake is situated in the Central Coast, approximately 130 miles northeast of Port Hardy and 65 miles south of Bella Coola. The lake is drained by the Wannock River into the head of Rivers Inlet.

Owikeno Lake is a glacial lake, approximately 40 miles long and 2 miles across at the widest point. It has 10 major tributaries supporting major sockeye and coho populations as well as incidental pink, chinook, chum and steelhead. Three narrows separate the lake into four basins, of which the first basin is the largest at about 20 miles in length. The second basin is approximately 8 miles long, and the third and fourth basins 3-5 miles in length (Fig. 1). The ten major spawning tributaries to Owikeno lake are the Inziana, Tzeo, Washwash, Sheemahant, Machmell and Neechanz Rivers, and the Dallery, Amback, Ashlulm and Genesee Creeks.

The Wannock River has a strong sockeye run and supports the majority of the system's Chinook. Sockeye spawning begins at the end of August in the systems at the upper end of Owikeno Lake. Spawning peaks between the beginning of September and mid-late October, and continues until the end of November.

Beach spawning areas are located primarily at river mouths and narrows (Fig. 1). The narrows between the second and third basins is commonly known as Sheemahant Flats. This is the largest of the beach spawning areas. Sheemahant Flats is a marshy, sandy area approximately 2.5 miles long. Beach spawning occurs primarily at the two ends, though the mid-area may be used in low water conditions. Passage through to the third basin is usually restricted to jetboats.

Two river systems, the Sheemahant and the Genesee, flow into the second basin. The Sheemahant River system, the largest in the lake, has approximately 12 miles of accessible spawning gravel, while the Genesee, the smallest, has approximately 1/2 mile.

A field camp is operated during the fall season at the mouth of the Genesee Creek. Stream enumeration and sampling programs are conducted each fall from the beginning of September to mid or late October by DFO personnel. During this time, the tributary systems are walked on an approximate 10 day interval (Fig. 2-5). Exceptions to this are the three major glacial systems, the Sheemahant, Machmell and Neechanz, which are surveyed by jetboat.

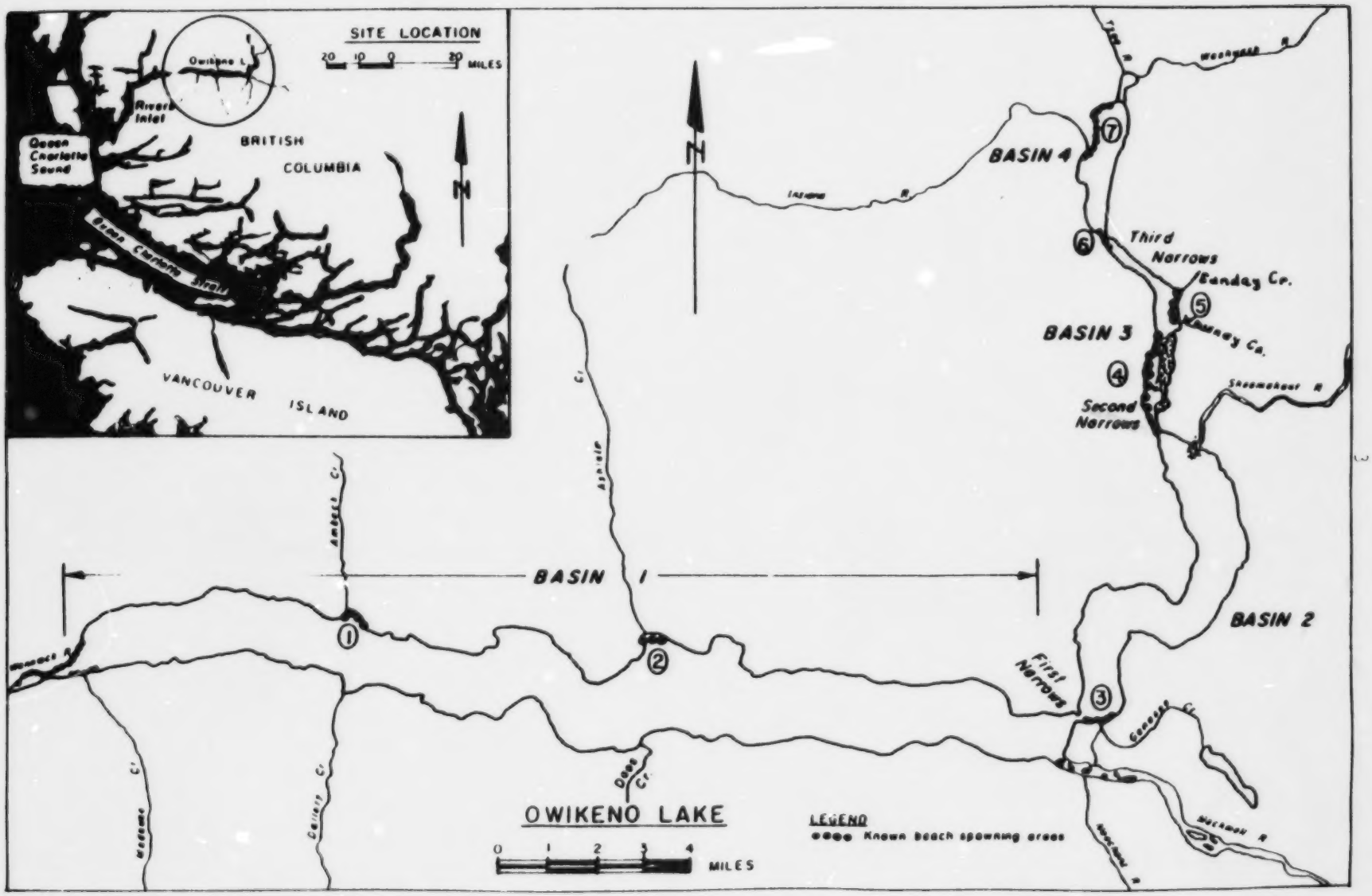

FIGURE 1.

Figure 1. Owikeno Lake and tributaries.

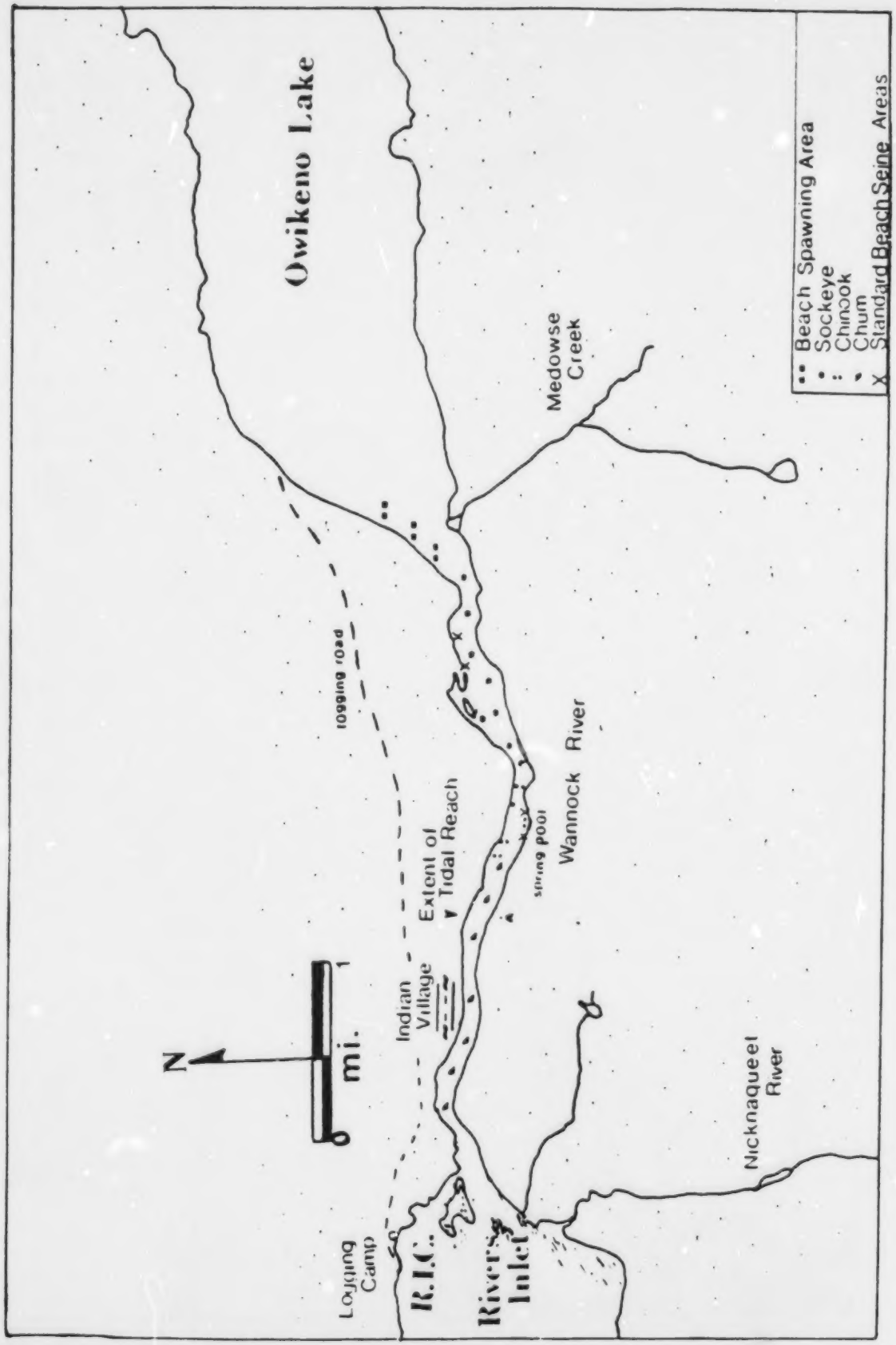

Figure 2. Wannock River and lower end of Owikeno Lake.

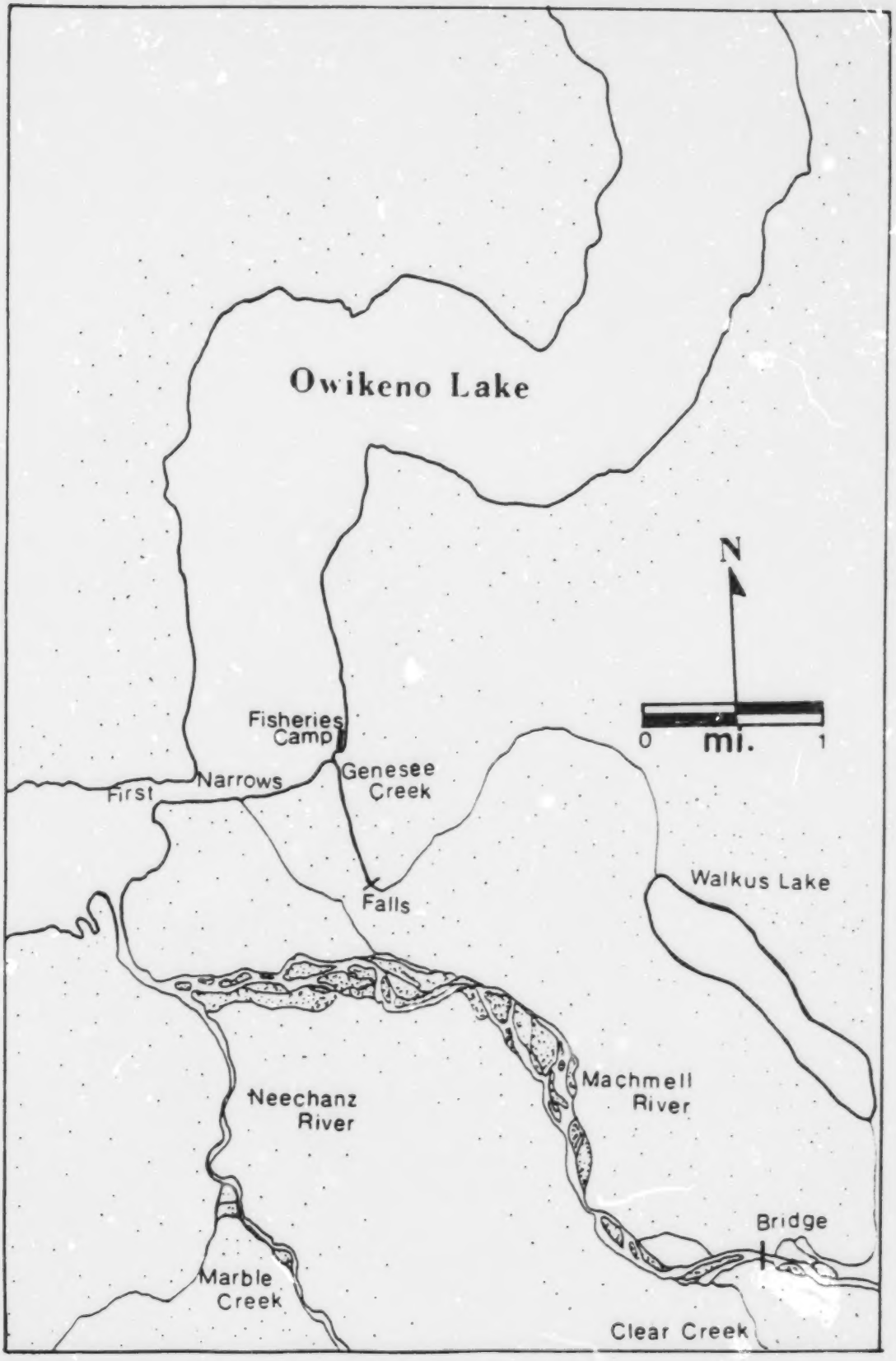

Figure 3. First Narrows, Owikeno Lake.

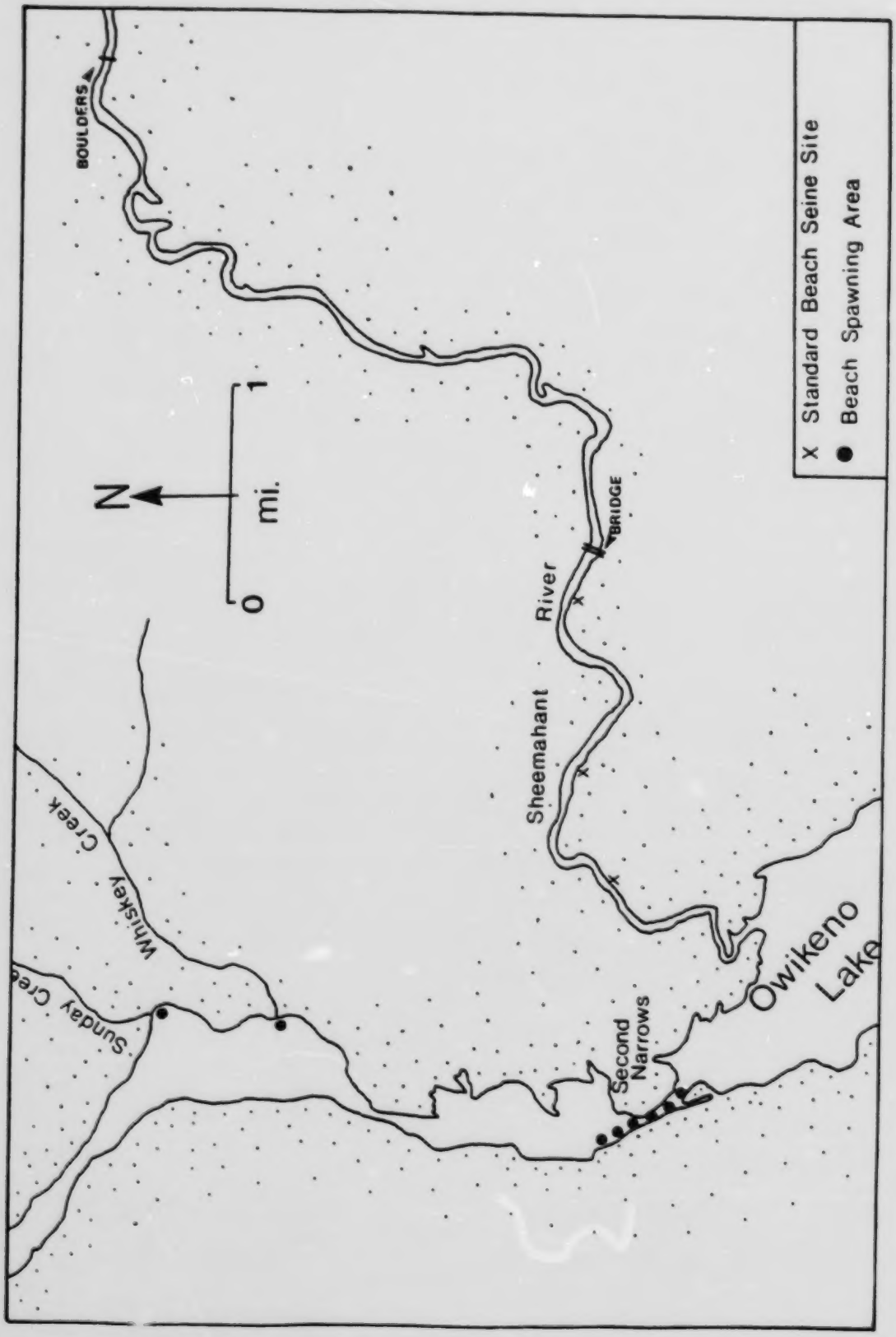

Figure 4. Second Narrows, Owikeno Lake.

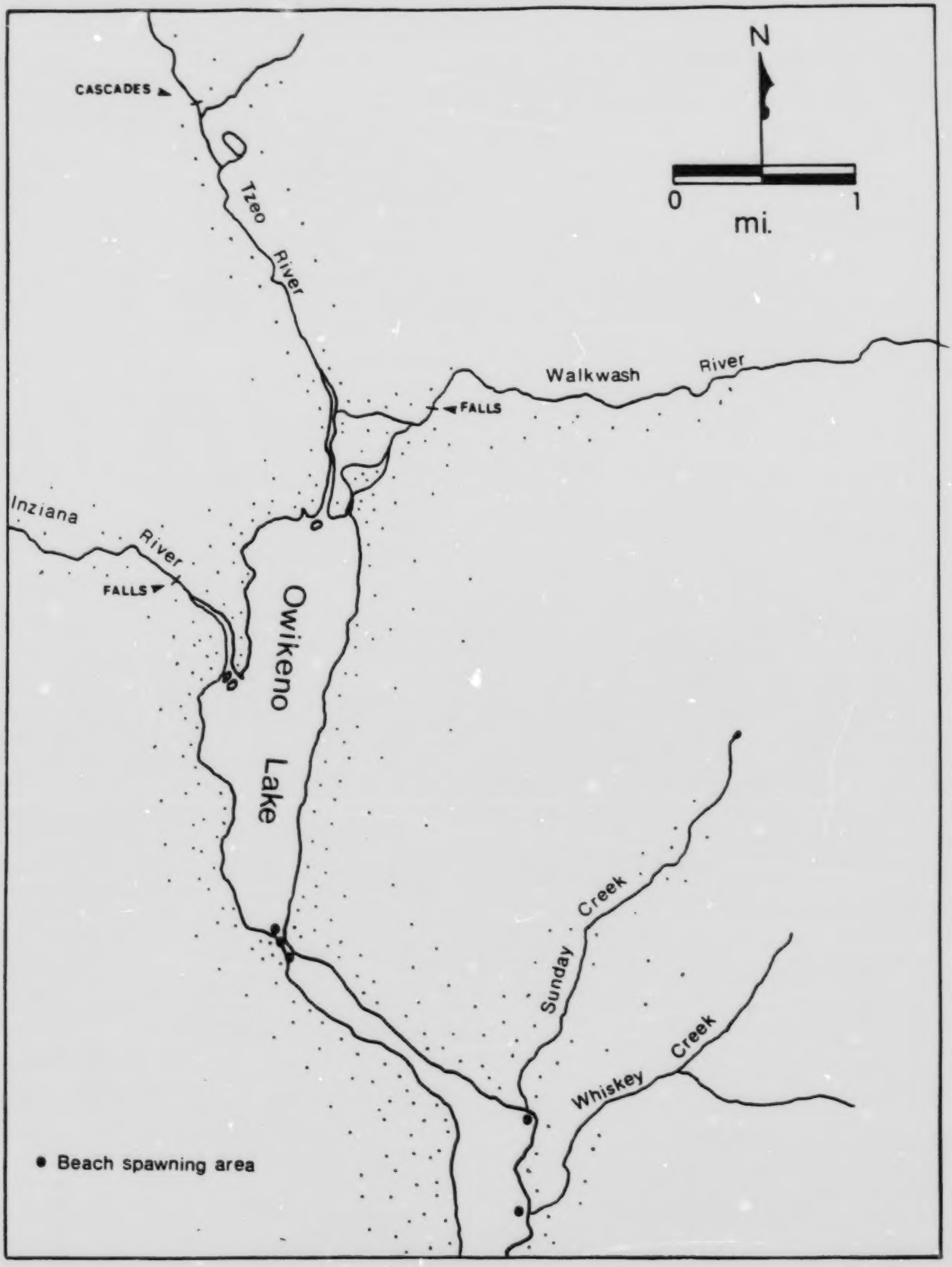

Figure 5. Top end of Owikeno Lake.

AMBACK (QUAP) CREEK

The Amback valley is heavily wooded for approximately 3 miles. Above this, the elevation increases rapidly, the valley narrows abruptly, and the creek sub-divides into a number of channels. Most of the drainage area is high gradient, but the stream is slow-moving over sand and gravel bars in the lower reaches. It has a low silt load and tends to be clear with little or no colour. Over the years this stream, although small in size, has been an excellent sockeye producer.

The remains of a fish counting fence are located about one hundred yards upstream from the river mouth. The fence was used in the 1930's and earlier by hatchery crews to assist in egg takes. In the early 1960's it was used to count the escapement to this creek.

Location- 51'127" NW
Accessible length: 2 miles
Mouth- Flows south into Owikeno Lake

ASHLULM CREEK

The Ashlulm valley is narrow and heavily forested. The stream is relatively small and fast flowing in the upper portions but slows considerably at the mouth. The creek is relatively clear with little or no colour. Spawning populations in the Ashlulm fluctuate widely from year to year.

Location- 51'126" NW
Accessible length- 8 miles
Mouth- flows south into Owikeno Lake

DALLERY CREEK

The heavily forested Dallery valley is narrow in the lower reaches but widens into a swamp about 6 miles upstream. There are cascades at the creek mouth and still-water spawning grounds for 2.5 to 3.5 miles upstream. The river is wide and slow with excellent gravel in the spawning areas.

Location- 51'127" NW
Accessible length- 4 miles
Mouth- flows north into Owikeno Lake

GENESEE CREEK

The Genesee flows approximately 3 miles from Walkus Lake to Owikeno Lake, dropping 500-1000 feet in elevation. A falls is located 3/4 mile above Owikeno Lake. The Genesee is a low water outlet of Walkus Lake. High water levels are discharged through a second outlet to the Machmell River. This results in a relatively constant flow at all times in the Genesee and makes the creek an excellent producer for its size.

Historically, Genesee Creek was a site of egg collection for the federal salmon hatchery operating in the area (1906-1934). Due to this fact, the creek's accessibility and the close proximity of field personnel accommodation, the Genesee Creek has one of the most complete historic data sets of any stream in the Owikeno system.

Location- 51'126" NW
Accessible length- 3/4 mile
Mouth- flows west into Owikeno Lake north of the Machmell River

INZIANA RIVER

The Inziana, approximately 13 miles in length, is accessible to salmon for the first 3/4 miles below a set of falls. Much of the river flows through mature timber stands. The lower reaches flow through a wide bed of good spawning gravel with considerable amounts of sand at the river mouth. The river is generally clear and uncoloured. Above the falls, the river and its tributary (Keet Creek) flow into lower gradient valleys which appear to have stretches of good spawning gravel.

Location- 51'126" NW
Accessible length- .75 miles
Mouth- flows east into the head of Owikeno Lake

MACHMELL RIVER

The Machmell valley is extensively wooded for about 28 miles. In the lower 10 miles, the river wanders considerably. Above this, a narrow canyon extends for approximately 5 miles. Above the canyon, a number of large tributary streams enter the Machmell. The river drains large icefields and is heavily silted. The combination of the silting and the dangerous river canyon has prevented an evaluation of the spawning potential of this stream. In the lower river reaches, sockeye have been observed spawning in shallow side channels. Above the canyon, some of the clear water tributaries have historically supported sockeye spawners. Due to a shallow network of side channels at the mouth, access to the river for enumeration of sockeye has only been intermittent in recent years.

Location- 51'126" NW
Accessible length- unknown
Mouth- flows west into Owikeno Lake

NEECHANZ RIVER

The Neechanz flows into the Machmell River about 1/2 mile above the mouth of the Machmell. The Neechanz valley is narrow and wooded, becoming extremely narrow with a steep gradient a few miles upstream. Marble Creek is the only tributary with a notable degree of spawning. Although the spawning area of the Neechanz is limited, the river produces well.

Location- 51'126" NW
Accessible length- 4 miles
Mouth- flows north into Machmell River

SHEEMAHANT RIVER

The Sheemahant is a large, heavily silted river situated in an extensive wooded valley. The river is accessible to salmon and has excellent spawning areas for 17 miles upstream before reaching an impassible set of falls. Aerial surveys suggest the spawning potential above the falls is equivalent to that below. The large size and heavy silting of this river makes observation difficult. The river wanders near its mouth and is often affected by large log jams.

Location- 51'126"NW
Accessible length- 17 miles
Mouth- flows west into Owikeno Lake

TZEO RIVER

The Tzeo flows from high gradient icefields into lower gradient forests. At about 4 miles from its mouth, it passes over a cascade deemed inaccessible to sockeye salmon. Below the cascade, the valley broadens out into a wide flatland as the gradient decreases. In the lower sections of the river, large quantities of fines form bars. The river has limited amounts of good spawning gravel.

Approximately 1 mile from the mouth of the Tzeo, the Washwash breakthrough enters the river. Near the river mouth, there is excellent spawning gravel that presumably has been washed downstream from the breakthrough located 1/4 mile above.

Location- 51'126"NW
Accessible Length- 4 miles
Mouth- flows south into Owikeno Lake

WANNOCK RIVER

The Wannock is a broad river flowing from Owikeno Lake to the head of Rivers Inlet. Extensive spawning beds for all species are in both the river and on the flats along the lakeshore near the outlet. The river is navigable and flows through a heavily forested Indian reservation. The river is under tidal influence from the mouth to above the Owikeno Indian village. The stabilizing effect of Owikeno Lake makes this river relatively stable.

Sockeye, chum, pink and chinook salmon spawn in the Wannock River from mid-September to November. Glacial silt in the water limits visibility to 4-8 inches, making visual counts difficult except in low water conditions.

The main chinook spawn occurs in mid-October when the fish retreat out of the lake to an area called the "spring pool". To obtain a more accurate escapement estimate of chinook, a mark-recapture program is conducted at the pool. Chinook are beach seined and tagged at five locations in this area. The seine set locations are all on the south side of the river. During high water conditions, sets are difficult to make. This is due to boulders and snags in the pool that snag and damage the seine nets. In lower water conditions, the lead line can usually be lifted over such obstructions. Fish are tagged with Peterson Discs and may be marked through removal of the adipose fin. Recapture success may be low as marked fish tend to remain in deeper waters.

The sockeye hold in Owikeno lake until October at which time they move into the river and begin spawning. Peak spawning is about mid-October. The spawn occurs in the area upstream of the spring pool to the mouth of Owikeno Lake. Counts are made of the numbers jumping and porpoising in the area along with catches using a beach seine. In low water conditions, visual counts in the shallows may also be made.

The chum spawn from the end of October into November. They are usually found in the area downstream of the spring pool to the river mouth. Numbers are estimated through visual counts.

Location- 51'127" NW
Accessible length- 3.9 miles
Mouth- flows west into Rivers Inlet

WASHWASH RIVER

The Washwash River valley has extensive wooded flats. Below the falls and cascades which are located 1.5 to 2 miles upstream, there are medium flows over excellent gravel. Above the cascades and falls the river and tributaries are high gradient. There are a number of small lakes in the system but none large enough to moderate the rate of discharge.

About one mile from the mouth, the river divides into two branches; one proceeding directly to Owikeno Lake, the other flowing into the Tzeo River. The Washwash first broke into the Tzeo in 1936. Since that time, both main channels of the Washwash have subdivided and wandered considerably. There have been at least three separate breakthroughs into the Tzeo. In 1961, the breakthroughs into the Tzeo began to take all the medium flows. The 'old channel' which went directly to the lake, had water in it only under high water conditions. During the fall freshets, spawning would occur in the channel which would later be exposed during the winter low water conditions. In 1968, an attempt was made to reopen the blocked channel and divide the flow equally between it and the Tzeo breakthrough. The remedial work was effective until severe flooding in the fall of 1968 and 1969 when major gravel movement, stream cutting and log jams completely changed the area.

The high discharge of the system and the loose gravel substrate of the lower valley tend to make the Washwash riverbed very unstable. Artificial stabilization has been suggested as a possible solution to the problem.

The potential of this system is considerable. It normally has strong spawning stocks using excellent gravel. Fish hatched in this basin enter a relatively productive section of the lake.

This river was a donor stream for both sockeye and chinook eggs for a federal salmon hatchery which operated in the area (1906-1934). The remains of a fence are still present near the mouth of the main channel.

Location- 51'126" NW
Accessible length- 1.5 miles
Mouth- flows S.W. into Owikeno Lake

PART II

A written description of the fall sockeye enumeration program for the years 1983-1987 is presented in this section. For each year, the field results are summarized and a list of the personnel involved in the survey is presented. Where available, a descriptive summary of the stream inspections is included.

1987 Owikeno Lake Fall Survey

The 1987 Owikeno Lake sockeye return was forecasted to be 1.97 million pieces, 970,000 pieces surplus to the target escapement. The fisheries in Rivers Inlet caught 416,071 sockeye over a 15 day commercial fishery running from June 28-Aug 17. The peak catches were taken in the three fisheries held during the weeks July 12-July 29. The total escapement to Owikeno Lake in 1987 was estimated to be 521,700 sockeye. The total return to Owikeno Lake in 1987 was estimated to be 937,771 sockeye.

The Rivers Inlet sockeye echosounding program operated from July 8-July 26. Both the catch and echosounding data indicated the sockeye run to be up to 2 weeks later than usual. Peak counts of 340-350,000 targets were observed over the nights July 21-24 and numbers started to decline on July 26.

The float camp at the mouth of the Genesee River was opened on September 7, signalling the start of the 1987 Owikeno Lake fall survey. Stream enumerations were fairly good due to good weather and water levels throughout most of the survey. The systems were individually inspected every 10 days by foot, boat or helicopter. Helicopter surveys were conducted on September 10, September 27, October 6 and October 14. Biosamples of sockeye hypural length, sex and otiliths were taken during stream walks.

In general, the sockeye escapement to Owikeno Lake was good. Both the sockeye and chinook escapements to the Wannock River were strong. However, sockeye escapements to the Sheemahant River, Genesee River, Dallery Creek and Amback Creek were weak.

Poor flying conditions delayed the start of the Industry tour by one day this year. The tour ran from October 8-15th and was attended by 4 industry representatives and 5 fisheries personnel.

Industry:	Ian McKay	Pacific Gillnetters Association
	Dave Malcolm	Pacific Trollers Associations
	Stewart Nelson	B.C. Packers
	Bonnie Brant	B.C. Packers
DFO:		
	Ron Goruk	Biologist
	Steve Bachen	Technician
	Lloyd Curley	Technician
	John Greenlee	A/Assistant District 7 Supervisor
	Brian Lunn	Fishery Officer

Industry representatives were very interested in proposed projects to stabilize the Washwash and Inziana Rivers. Participants expressed a continued interest in the industry tour program and felt it worthwhile to involve more industry personnel.

The Genesee Camp was winterized and closed on October 15th. Due to low water on the Wannock River, the Sea Truck had to be trucked out to Rivers Inlet.

Camp Repair Requirements

The Genesee camp requires the structural repairs detailed below.

The camp wiring is in poor condition. The camp should be rewired and a master switch installed. Currently, appliances and lights in the generator shed and the warehouse are operated from extension cords run from the other buildings. Power outlets and lights are often connected to the power source by open wires.

Moss is damaging the duroid shingles on the pallace roof. The roof should be covered with aluminum sheeting to repair and prevent further damage. Roofing screws are needed to secure the aluminum already installed on the other building roofs.

Some of the stiff-leg fastenings on the standing boom protecting the camp floats have broken and need to be replaced. The big residence float requires additional logs to increase its buoyancy. The float should also be resitted in deeper water. The generator float should be replaced as it is waterlogged and the lashings are rotten.

The two generators installed this year (5kw Lister, 13.5 kw Doitz) are both old and require regular monitoring. The camp buildings require painting. In addition to maintaining the structures, this would improve the appearance of the camp. With the completion of the above repairs, the camp should be in good order for some years to follow.

1987 STREAM INSPECTION SUMMARIES

Sheemahant River

The Sheemahant River had a poor escapement this year. On the lower bars below the bridge there were a few high water redds. Above the bridge, there were few redds on the shallow bars. There was some escapement to the small feeder creeks.

On September 11th, four drift net sets were made approximately 9 miles upriver. The total sockeye catch from all four sets was 3 fish. However, sockeye and some chinook were observed throughout the system. A seine set made below the bridge caught 19 sockeye and several coho.

On October 13th, the industry tour made 6 sets below the bridge netting 54 male, 98 female and 7 jack sockeye, 33 coho and some trout and Dolly Varden.

On the October 14th helicopter survey the bulk of the fish were located in the lower two thirds of the river. Although the visibility was good, few signs of fish activity were seen in the upper reaches.

Sockeye were airlifted by field personnel over the cascades in both September and October. These fish were seined in three separate sites below the bridge. Because of the poor escapement, fewer fish were moved than planned. On September 26 and 27, 16 seine sets netted 335 sockeye for airlifting. Airlifts were also performed on the 5th and 6th of October, with 165 sockeye being moved. In all sets, coho, trout and Dolly Varden were caught incidentally.

A seine set made downriver of the bridge on November 26th did not catch any fish. The river visibility was good at this time but no fish were seen. The river showed evidence of recent high water, debris flow and the shifting of some gravel bars.

The last helicopter survey was performed on January 11, 1988. The final escapement for the river was estimated to be 100,000 sockeye.

Genesee River

The Genesee had an escapement of 200 sockeye this year. This was the worst escapement in the entire system. In addition, predation by grizzly bears at the spawning beds was high. The poor escapement was reflected by the lack of jumpers present around the camp site and the absence of both fish and carcasses in the system during inspections in November.

Inziana River

The Inziana River had a good sockeye escapement this year. The fish spawned throughout the system with a fair number spawning in the areas around and below the breakthrough. Egg survival in these sites is expected to be limited as low water levels exposed the streambed during the winter. Approximately 25% of the total spawn may have been lost. Inspection of the river by helicopter in January found 95% of the water flowing through the breakthrough. Work will be done to block off the breakthrough during the summer of 1988.

Wannock River

The Wannock River had an excellent escapement of 200,000 sockeye. Seine sets performed during the Industry tour gave a one-set total catch of 1267 landed sockeye, and two incomplete sets of 822 sockeye. At the same time 32 chinook salmon were tagged in the spring pool. A number of chinook were observed on redds in the pool. Seal predation on the river was high with an estimated 200 seals present in the area. At the river mouth a large number of Stellar sea lions were also present.

Washwash River

The Washwash River had a fair sockeye escapement this year. There were few high water redds in the system due to the relatively stable water levels. Throughout the field season, the proportion of the river flowing through the breakthrough varied from 30-50% of the total river volume. A log jam prevents the entire river from flowing through the breakthrough. If the log jam broke, up to 80% of the spawn would be lost with the change in flow. The river is scheduled to be stabilized at the junction of the breakthrough in the summer of 1988.

A logging road was built along the Tzeo and crosses over to the Washwash near the cascades. The hills between the Tzeo and Washwash falls were logged this year.

OWIKENO LAKE SOCKEYE SURVEY 1986

The forecast of the sockeye return to Owikeno Lake in 1986 was approximately 2 million pieces. The return was allocated equally between expected catch and target escapement. A total of 340,888 sockeye were caught in the Rivers Inlet net fishery in 1986. The majority of the catch was taken in the targeted sockeye fishery operating for 16 days in the period June 29 to Aug. 8. The remaining sockeye catch was taken incidently in a targeted pink fishery during the latter part of August. The total stock return to Owikeno Lake in 1986 was estimated to be 1,176,388 sockeye with an escapement of 825,500.

Inseason estimates of sockeye escapement were provided by an echosounding survey operating from July 9 to 26 in the sanctuary area at the head of Rivers Inlet. The first major increase in escapement was noted the night of July 15/16. The escaped population gradually increased to a peak estimated abundance of 318,701 sockeye on the final survey date (July 25/26). Final results from the echosounding survey were inconclusive as there were reports of sockeye moving up the Wannock R. several days prior to July 25.

The 1986 Owikeno Lake sockeye escapement survey program was initiated Sept. 3, with the opening of the DFO float camp at the Genesee River. Systematic surveys were made of all tributaries and beach spawning areas from Sept. 6 to Oct. 17. At the termination of the program, a large number of sockeye remained outside some spawning streams. Escapement estimates from a fixed-wing survey conducted in November were incorporated into the initial stream survey estimates to obtain a total stream escapement for 1986.

The traditional ground surveys were augmented by helicopter surveys on all streams during the two periods, Sept. 10-11 and Oct. 1-2. In the future, ground surveys and aerial surveys may be coordinated to establish a relationship between the two estimation techniques. In addition, standard beach seine sites were established on the Sheemahant, Neechanz, and Wannock Rivers. More reliable indices of sockeye abundance should be achieved through the use of seine nets as the larger catches are probably more comprehensive than those of the traditional drift gillnets. This method of enumeration will continue in the future.

A survey of Wannock R. chinook was made on Oct. 14. Visual observations indicated a strong chinook return. A total of 49 chinook, caught in five beach seine sets made in the "spring pool", were tagged for a mark/recapture estimate of abundance.

Weather and stream conditions were generally favorable throughout the survey period. Only one survey, scheduled for Sept. 23 on the Inziana R., was aborted because of flood conditions. During October, a lack of precipitation resulted in below normal stream levels throughout the area. The low water levels probably limited the spawning habitat available and sockeye immigration into some systems. Lake level, measured at the Genesee River camp, gradually dropped from a height of 12.5 ft. to 8.05 ft. during the period of the survey program.

Representatives from various factions of the fishing industry participated in escapement surveys from Oct. 9 to 17. A list of attending representatives and their respective organizations follows.

Industry:	Art Monk	B.C. Packers
	Dunc Cameron	B.C. Packers
	Stuart Nelson	B.C. Packers
	Ian MacKay	Pacific Gillnetters Association
	Ed Wilson	UFAWU
DFO:	Steve Bachen	Technician
	Ron Goruk	Biologist
	Don Radford	Biologist
	Tom Perry	North Coast Operations Manager
	John Greenlee	Fishery Officer
	Milan Kupr	Fishery Officer
	Brian Lunn	Fishery Officer
	George Emes	Technician

1986 STREAM INSPECTION SUMMARY

Sheemahant River

An helicopter survey conducted on October 2 found sockeye to be present throughout the total spawning area of the Sheemahant and its side channels. Fish were seen to be spawning from the mouth of the river up to the cascades. The heaviest concentration of spawners extended from 1/4 mile up from the river mouth to 3/4 mile below the cascades. In most areas, all accessible gravel had been utilized as had high water sites.

OWIKENO LAKE SOCKEYE SURVEY 1985

The Genesee River field camp was opened by DFO personnel on September 3, 1985 for the annual fall sockeye survey.

The weather was good during most of the survey. The creeks and rivers were a little high the first week of September, but dropped to normal to low levels from the latter part of September to the second week of October. After that, the rivers were in flood conditions until the beginning of November.

The systems were inspected and sampled on a regular basis (about every 10 days) weather and water conditions permitting. All the systems were inspected on three different occasions by helicopter. This proved to be a very quick and accurate way to cover the area in a short period of time.

Predation levels were normal in all the systems with the highest concentration of grizzly bears being at the top end of the lake. There appeared to be a large population of seals throughout the lake and at the head of Rivers Inlet.

Due to the flood conditions on all systems, the annual Industry tour starting on October 9 lasted only 6 days. During the first few days of the survey, the creeks and rivers inspected were clear and reasonably low. Sheemahant Flats when inspected on the 11th had excellent visibility and a good showing of fish. By the 13th, all systems were in full freshet and continuation of the survey was impossible.

Fisheries personnel involved in the fall surveys were:

Dave Peacock	Biologist
Robert Bachen	Technician
Dennis Rowse	Biologist
Ron Goruk	Biologist
Brian Lunn	Fishery Officer
Don Radford	Biologist
Steven Bachen	Technician
Mike Jones	Guardian
Dave Southgate	Technician
John Greenlee	Fishery Officer
Ross Skogg	Vessel Skipper
Milan Kupr	Fishery Officer

Industry:

Art Monk	B.C. Packers
Duncan Cameron	B.C. Packers
Don Taylor	UFAWU

OWIKENO LAKE SOCKEYE SURVEY 1984

The Owikeno Lake Fall Survey started on September 6, 1984 when Fisheries personnel began inspecting the ten major systems on a regular basis. The creeks and rivers were walked; jet-boated and drift gillnetted every 7-10 days, weather and water levels permitting.

The sockeye were spread evenly throughout the Owikeno Lake system. Due to a very low escapement into the area, most of the stream counts were below average. Although a few counts were missed due to high water, no high water redds were evident when the water levels dropped.

The weather during the fall survey was very wet and the water levels were high. There were two major floods in the fall.

Heavy rain on September 4 resulted in the first high water. Except for two days of fair weather, it rained from September 7 to the 15th. The lake rose from 10.5 ft. (3.2 m.) to 16.7 ft. (5.09 m.) in this time. The weather was sunny from the 18th to the 30th, with the lake dropping to 9.0 ft. (2.74 m.).

It rained from October 1 to 13th causing the lake to rise from 8.9 ft. (2.7 m.) to 19 ft. (5.79 m). In the three day period, October 7 to October 9, heavy rains resulted in the greatest increase in lake level from 13 ft. (3.96 m.) to 19 ft. (5.79 m). On the 10th, the freezing level dropped, bringing the snowline midway down the mountains. With the cold weather, water levels dropped rapidly from 19 ft. (5.79 m.) to 13 ft. (3.96 m.) in four days. After the 14th, water levels were reasonably stable due to the low freezing levels. The first snowfall of about 2.5 ft. (.76 m.) fell around the 27th of October. The creek and river levels fell to very low water conditions. Water levels were still low to very low on the last inspections conducted on November 14 and 15th. The weather from the beginning of November to mid-November was very cold and clear with NE outflow winds.

Due to bad weather, the annual Industry tour began a day late on October 10. By the 14th, the better weather improved visibility and made counting easier.

Chinook salmon were beach seined and tagged on the Wannock River on October 17. High water conditions with swift currents made it difficult to set the seine net. A total of 3 chinook, 9 coho and 3 chum were caught. One chinook was tagged and released, the other two were held for egg takes. An 150 ft. (45.7 m.) tangle net supplied by the Snootli Hatchery was tested. Due to the strength of the current, fish were lost during the drifts. Four drifts were made with 7 chinook and 3 coho caught. Three of the chinook were tagged and released, the others were held for egg takes. The chinook were tagged with Peterson Disc tags.

In general, the chinook showing in the spring pool was poor, with few chinook being observed throughout the area.

The people involved in the tour this year were:

Industry:	Art Monk	B.C. Packers
	Duncan Cameron	B.C. Packers
	Ed Wilson	UFAWU
	Dave Malcolm	Pacific Gillnetter's Association
DFO:	Steven Bachen	Technician
	Vicky Rancier	Technician
	Ron Goruk	Biologist
	Glenn Fox	Technician
	Gord McEachen	Fishery Officer
	Brian Lunn	Fishery Officer

At times during the fall survey, there were fishery officers and individuals from the Nanaimo Research Station present. The tour ended on the 20th of October.

1984 STREAM INSPECTION SUMMARY

Washwash River

In the 1984 floods, the Washwash River changed dramatically. Most of the water started flowing down a breakthrough created due to a large log jam. It was estimated that approximately half of the escapement would be lost because the main stem of the river dried up in low to normal water levels. Ray Finnegan was notified of the condition, and was to observe the river and jams the following spring and summer.

There was approximately the same amount of fish spawn in the mainstem as in the breakthrough. It was very difficult to make accurate counts in the bottomend of the breakthrough due to the large amount of spruce blowdown.

OWIKENO LAKE SOCKEYE SURVEY 1983

The 1983 Owikeno Lake Fall Sockeye Survey started on September 1, when DFO personnel opened the Genesee River field camp.

During the first 10 days of September, some of the stream levels were a little above normal. By the 10th, stream levels were normal and visibility was good. The stream levels were normal to low until October 21, after which it began to rain, with snow at the higher elevations. The sockeye survey ended on the 27th of October when the Genesee camp was closed.

The sockeye were spread evenly throughout the lake systems. There were no major freshets in either September or November. On September 7, the lake level was at a high of 13.4 ft. (4.04 m.).

Starting September 1, the Fisheries personnel counting the systems were Steven Bachen, Vicky Rancier, Glenn Fox, and Robert Bachen, with Dave Peacock, Ron Goruk, Gord McEachen and Brian Lunn in for short periods throughout the tour. On September 28 and 29th, there were two people from the Nanaimo Research Station taking brain and flesh samples from fish in the Neechanz and Genesee Rivers.

The 1983 Industry tour ran from October 8 to October 17. During the tour, the weather was excellent, with rain on the 9th and 16th. The creeks and rivers had good visibility. Although all systems showed evidence of bear activity, few bears were seen. Seals were present at the mouths of all systems. Large numbers were seen at the top of the Wannock River and the mouth of the Sheemahant River.

On October 15, chinook were beach seined and tagged on the Wannock River. The weather was sunny, clear and cold. The lake level was 7.9 ft. (2.4 m.) and the river level was 5.9 ft. (1.8 m.). The river was clear, the seining conditions excellent. Eighty chinook were caught and tagged in seven seine sets. This number was greater than that caught and tagged in any of the previous years. The excellent water conditions were a big factor to the large number caught as sets were made that would not have been possible in higher water conditions.

The individuals on the Industry tour were:

Industry:	Art Monk	B.C. Packers
	Duncan Cameron	B.C. Packers
	Lindsay Derksen	UFAWU
D.F.O.	Dave Peacock	Biologist
	Steve Bachen	Technician
	Vicky Rancier	Technician
	Glenn Fox	Technician
	Gord McEachen	Fishery Officer
	Brian Lunn	Fishery Officer
	Uriah Orr	Biologist
	Tom Shardlow	Biologist

PART III

Daily records of the field sockeye enumeration program are presented in this section for the years 1971-1987. The data sources used include field stream notes (1983-1987), field program diaries and annual field summaries filed in the North Coast Division, Management Biology office. Final sockeye escapements by stream for 1970-1987 are listed in Appendix I. Appendix II lists the alternate names that Owikeno Lake tributary streams are known by. Abbreviations used in the tables are defined in Appendix III.

OWIKENO LAKE 1987- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER			COMMENTS
		LIVE	DEAD	%NEW		COND.	VIS.	LEVEL	
SEPT 10	AMBACK	100	200		HLCPTR	CLEAR	EXLNT	NORMAL	# INCLUDES PINK. DEAD ALL BEAR KILLS.
SEPT 27	AMBACK	3-500	LOTS		HLCPTR	CLEAR	FAIR	NORMAL	COUNTABILITY POOR. GOOD SHOWING OUT FRONT. LOTS OF BEAR KILLS.
OCT 06	AMBACK				HLCPTR	CLEAR	FAIR	NORMAL	FISH COUNTABILITY FAIR. OVERGROWN BUSH.
OCT 12	AMBACK	2000	260		WALK	CLEAR	EXLNT	BELOW NORM.	LOTS OF FISH IN BAY. PREDATION HIGH. FISH IN CREEK 1 WEEK.
OCT 14	AMBACK	2-3000			HLCPTR				FISH HOLDING.
SEPT 10	ASHLULM	7000	300		HLCPTR	CLEAR	EXLNT	NORMAL	20 PK, 2 DD, 12 CK, 1 CM DD.
SEPT 27	ASHLULM	7000	LOTS	70	HLCPTR	CLEAR	GOOD	NORMAL	LARGE #'S AT LOWER END- GREEN.
OCT 06	ASHLULM	7500			HLCPTR	CLEAR	EXLNT	NORMAL	5000 BELOW WALKING AREA, 2500 ABOVE.
OCT 11	ASHLULM	2875	FEW	70	WALK	CLEAR	EXLNT	NORMAL	FISH IN BAY. INDUSTRY TOUR.
OCT 15	ASHLULM								TTD 29,000. INDUSTRY TOUR.
SEPT 10	DALLERY	2000			HLCPTR	CLEAR	EXLNT	NORMAL	SOME PINK. 3 GRIZZLYS.
SEPT 22	DALLERY	4500	30	60	WALK	CLEAR	FAIR	ABOVE NORM.	200 PINK. COUNTABILITY FAIR. 1 GRIZZLY.
SEPT 27	DALLERY	5000	SOME	50	HLCPTR	TEA	GOOD	NORMAL	DIST. FROM LOWER POOLS-TOP END. COUNTABILITY GOOD. 1 BLACK BEAR.
OCT 06	DALLERY	9000		80	HLCPTR	CLEAR	EXLNT	NORMAL	FISH HOLDING AT MOUTH. STREAM FULLY UTILIZED.
OCT 10	DALLERY	5400		75	WALK	CLEAR	EXLNT	NORMAL	NO FISH AT MOUTH. FISH THROUGHOUT. INDUSTRY TOUR.
OCT 14	DALLERY								TTD 21500. INDUSTRY TOUR.
SEPT 18	GENESEE	200		100	WALK	CLEAR	EXLNT	NORMAL	300 PINK. COUNTABILITY EXLNT. 2 BEAR.
OCT 11	GENESEE		2		WALK	CLEAR	EXLNT	NORMAL	COUNTABILITY EXLNT. INDUSTRY TOUR.
OCT 13	GENESEE	110		100	SN SET				SET AT CREEK MOUTH. NO FISH IN CREEK. V. FEW JUMPERS AROUND CAMP.
SEPT 10	INZIANA	13000	2000		HLCPTR	SILT	GOOD	NORMAL	HEAVY SPAWNING AT BOTTOM. FISH DIST. TO FALLS.
SEPT 19	INZIANA	15000	3-5000	60	WALK	SILT	POOR	ABOVE NORM	HEAVY RAIN, COUNTABILITY POOR. 1 DEAD GRIZZLY AT FALLS.
SEPT 27	INZIANA	LOTS	LOTS		HLCPTR	SILT	POOR	NORMAL	FISH COUNTABILITY POOR.
SEPT 30	INZIANA	15000	5000	50	WALK	SILT	FAIR	NORMAL	COUNTABILITY FAIR. FISH THROUGHOUT.
OCT 06	INZIANA	12-14000	LOTS	50	HLCPTR	SILT	FAIR	NORMAL	COUNT QUESTIONED-SEE OCT. 9 COUNT.
OCT 09	INZIANA	1700		5	WALK	TURBID	FAIR	NORMAL	INDUSTRY TOUR.
OCT 14	INZIANA	2000		0	HLCPTR				TTD. 44,500.
SEPT 10	MACHMELL	3			HLCPTR	MUDDY	POOR	NORMAL	VIS. EXTREMELY POOR. EAGLES PRESENT. BEAR WITH FISH.
SEPT 27	MACHMELL				HLCPTR	MUDDY		NORMAL	CLEARWATER- 7-800 SX, 100% OLD, WATER CLEAR.
OCT 06	MACHMELL				HLCPTR	MUDDY	NIL	NORMAL	CLEARWATER-VIS EXLNT, 450 SX.
OCT 15	MACHMELL								TTD. MACHMELL UNK. CLEARWATER- TTD 1500.
AUG 19	NEECHANZ	300		100	JETBOAT	SILT	FAIR	NORMAL	COUNTABILITY FAIR. CK PRESENT. 1 GRIZZLY.
SEPT 10	NEECHANZ	17000		70	HLCPTR	CLEAR	EXLNT	NORMAL	6 CK, 4 DD. # BEARS. TEST SN-203 SX, 3 CO, 1 PK, 1 CM.
SEPT 27	NEECHANZ	17000		50	HLCPTR	SILT	GOOD	NORMAL	BEAR PREDATION.
OCT 06	NEECHANZ	4000			HLCPTR	SILT	FAIR	NORMAL	
OCT 13	NEECHANZ	1480		10	WALK/FL	SILT	FAIR	BELOW NORM.	TEST SET- 2SX, 15 CARCASSES. INDUSTRY TOUR.
OCT 14	NEECHANZ								TTD. 37,000.

OWIKENO LAKE 1987

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER			COMMENTS
		LIVE	DEAD	%NEW		COND.	VIS.	LEVEL	
SEPT 10	SHEEMAHANT				HLCPTR	SILT	POOR	NORMAL	FEW FISH PRESENT.
SEPT 26	SHEEMAHANT				HLCPTR	SILT	NIL	NORMAL	2 DAYS TEST SN- 175 M, 160 F, 335 COHO/TROUT. 335 SX AIRLIFTED.
OCT 05	SHEEMAHANT				HLCPTR	SILT	NIL	NORMAL	2 DAYS TEST SN- 87 M, 78 F, 165 COHO, 1CK. 165 SX SHIPPED.
OCT 13	SHEEMAHANT			50	FLOAT	SILT	FAIR	BELOW NORM.	TEST SN- 152 SX, 7 JACKS, 33 COHO.
OCT 14	SHEEMAHANT	6100			HLCPTR	TURBID	GOOD	BELOW NORM.	TTD. 100,000. INDUSTRY TOUR.
SEPT 10	TZEO	2500			HLCPTR	SILT	FAIR	NORMAL	FISH AT TOP END.
SEPT 27	TZEO	2500	FEW	30	HLCPTR	SILT	POOR	NORMAL	
OCT 06	TZEO	3000	PRES		HLCPTR	SILT	FAIR	NORMAL	
OCT 08	TZEO	2300	FEW	0	WALK	SILT	POOR	NORMAL	
OCT 15	TZEO								TTD. 10,500. INDUSTRY TOUR.
OCT 08	SHORT FLATS					SILT	NIL		WHISKEY 80SX, SUNDAY 10-20SX, 3RD NARROWS 62 SX.
OCT 15	SHORT FLATS								TTD. FOR FLATS AND NARROWS- 2500. INDUSTRY TOUR.
SEPT 10	WASHWASH	1200	1000		HLCPTR	CLEAR	EXLNT	NORMAL	FISH TO FALLS.
SEPT 19	WASHWASH	22000	5000	75	WALK	CLEAR	EXLNT	NORMAL	12 PK, 1 DD CK. SX SCHOOLED AT MOUTH.
SEPT 27	WASHWASH	19000	LOTS	50	HLCPTR				SOME FISH IN ESTUARY. FISH WELL DISTRIBUTED.
OCT 06	WASHWASH	15000			HLCPTR	CLEAR	GOOD	NORMAL	COUNT QUESTIONED- SEE OCT 9.
OCT 09	WASHWASH	8500		80	WALK	CLEAR	GOOD	NORMAL	CARCASSES IN BREAKTHROUGH.
OCT 15	WASHWASH								TTD. 49,700. INDUSTRY TOUR.
OCT 14	WANNOCK			100	FLOAT	SILT	FAIR	BELOW NORM.	SN SETS-2089 SX, 32 CK, 43 CM, 3 CO. TTD. 200,000-INDUSTRY TOUR.

OWIKENO LAKE 1986- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER			COMMENTS
		LIVE	DEAD	%NEW		COND.	VIS.	LEVEL	
SEPT 11	AMBACK	50		?	HLCPTR	CLEAR	GOOD	NORMAL	
OCT 02	AMBACK	3-5000	PRES.	90	HLCPTR	CLEAR	FAIR	BELOW NORM.	
OCT 16	AMBACK	11000	1500	30	WALK	CLEAR	EXLNT	BELOW NORM.	
SEPT 08	ASHLULM	8000	650	40	WALK	TEA	GOOD	NORMAL	1500 PINK, 50 CHUM
SEPT 11	ASHLULM	15000	1000	?	HLCPTR	TEA	GOOD	NORMAL	
SEPT 22	ASHLULM	5500	4000	45	WALK	CLEAR	GOOD	BELOW NORM.	600 PINK
OCT 02	ASHLULM	10000	LOTS	50	HLCPTR	CLEAR	GOOD	BELOW NORM.	
OCT 12	ASHLULM	8500	1700	35	WALK	CLEAR	EXLNT	BELOW NORM.	
SEPT 11	DALLERY	5500	50	?	HLCPTR	CLEAR	GOOD	NORMAL	
SEPT 19	DALLERY	4500	1000	70	WALK	CLEAR	EXLNT	BELOW NORM.	
OCT 02	DALLERY	8000	LOTS	50	HLCPTR	?	GOOD	BELOW NORM.	
OCT 15	DALLERY	13000	LOTS	70	WALK	CLEAR	EXLNT	EXT. LOW	
SEPT 09	GENESEE	5	0	100	WALK	CLEAR	EXLNT	NORMAL	
SEPT 20	GENESEE	35	50	100	WALK	CLEAR	EXLNT	EXT. LOW	
OCT 09	GENESEE	4000	4500	75	WALK	CLEAR	EXLNT	BELOW NORM.	
OCT 17	GENESEE	2000	8000	70	WALK	CLEAR	EXLNT	EXT. LOW	
SEPT 06	INZIANA	20-2500	100	90	WALK	SILT	FAIR	NORMAL	
SEPT 10	INZIANA	20-2500	UNK	?	HLCPTR	SILT	GOOD	NORMAL	
SEPT 23	INZIANA	PRESENT	LOTS		BOAT	MUDDY	NIL	FLOOD	
OCT 01	INZIANA	20000	LOTS	70	HLCPTR	CLEAR	EXLNT	BELOW NORM.	
OCT 10	INZIANA	3700	200	0	WALK	SILT	POOR	NORMAL	
SEPT 11	MACHMELL				HLCPTR	SILT	POOR	NORMAL	RELATIVELY GOOD SHOW OF LIVE SOCKEYE AND REDDS
SEPT 14	MACHMELL				WALK	SILT	POOR	NORMAL	1200-1500 LIVE IN CLEAR CRK; SOME REDDS IN MACHMELL
OCT 02	MACHMELL	2000	PRES.		HLCPTR	SILT	FAIR	NORMAL	800 LIVE IN CLEAR CRK
OCT 15	MACHMELL				WALK				100 LIVE IN CLEAR CRK
SEPT 07	NEECHANZ				SEINE				CATCH IN SN DRIFTS AT 2 SITES: 208 SX, 33 JACKS
SEPT 08	NEECHANZ	3000	50	50	WALK	SILT	POOR	NORMAL	
SEPT 10	NEECHANZ	19000	FEW	?	HLCPTR	SILT	GOOD	NORMAL	ESTIMATE INCLUDES 2000 LIVE IN MARBLE CRK
SEPT 21	NEECHANZ	14000	1500	50	WALK	CLEAR	GOOD	BELOW NORM.	ESTIMATE INCLUDES 600 LIVE IN MARBLE CRK
OCT 02	NEECHANZ	15000		50	HLCPTR	CLEAR	GOOD	BELOW NORM.	ESTIMATE INCLUDES MARBLE CRK
OCT 12	NEECHANZ	10200	650	20	WALK	SILT	POOR	BELOW NORM.	
SEPT 07	SHEEMAHANT				SEINE	SILT	POOR	ABOVE NORM.	CATCH IN SN DRIFTS AT 6 SITES: 210 SX, 6 CO
SEPT 11	SHEEMAHANT				HLCPTR	SILT	FAIR	NORMAL	RELATIVELY GOOD SHOW OF LIVE SOCKEYE AND REDDS
SEPT 27	SHEEMAHANT				SEINE	SILT	GOOD	NORMAL	CATCHES IN SN DRIFTS AT 4 SITES: 387 SX, 8 SX JACKS, 36 CO
OCT 02	SHEEMAHANT	200000	LOTS	80	HLCPTR	TEA	GOOD	BELOW NORM.	
OCT 11	SHEEMAHANT			75	SEINE	SILT	POOR	NORMAL	CATCH IN SN DRIFTS AT 4 SITES: 178 SX, 1 SX JACK, 23 CO

OWIKENO LAKE 1986

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER			COMMENTS
		LIVE	DEAD	%NEW		COND.	VIS.	LEVEL	
SEPT 06	SHAKT FLATS	0			BOAT				
SEPT 10	SHAKT FLATS	0			HLCPTR				
SEPT 17	SHAKT FLATS	500			BOAT		GOOD		
SEPT 06	SUNDAY	20-25			BOAT				
SEPT 10	SUNDAY	20			HLCPTR				
SEPT 17	SUNDAY	300			BOAT		EXLNT		
SEPT 06	3RD NARROWS	50-100			BOAT				
SEPT 10	3RD NARROWS	PRESENT			HLCPTR				
SEPT 17	3RD NARROWS	700			BOAT		GOOD		
SEPT 06	TZEO				GILLNET	MUDDY	NIL	ABOVE NORM.	CATCH IN GN DRIFTS AT 2 SITES: 5 SX
SEPT 10	TZEO	3000	FEW	?	HLCPTR	SILT	GOOD	NORMAL	
SEPT 18	TZEO	3000	200	40	WALK	CLEAR	GOOD	BELOW NORM.	
OCT 01	TZEO	3000	LOTS	50	HLCPTR	CLEAR	EXLNT	BELOW NORM.	
OCT 13	TZEO	550	PRES.	0	WALK	SL. TUR	GOOD	BELOW NORM.	
SEPT 06	WASHWASH	2000	20	95	WALK	CLEAR	EXLNT	NORMAL	
SEPT 10	WASHWASH	2500-30	UNK	?	HLCPTR	CLEAR	GOOD	NORMAL	
SEPT 18	WASHWASH	6000	1000	70	WALK	CLEAR	GOOD	NORMAL	MAJORITY OF SOCKEYE IN MAINSTEM
OCT 01	WASHWASH	6000	LOTS	50	HLCPTR	CLEAR	EXLNT	NORMAL	
OCT 10	WASHWASH	11500	4500	75	WALK	CLEAR	EXLNT	BELOW NORM.	
OCT 14	WANNOCK				GN/SN				CATCH IN GN DRIFT: 4 SX; 2 SN DRIFT: 1256 SX, 10 SX JACKS, 2 CO
SEPT 06	WHISKEY	0			BOAT				
SEPT 10	WHISKEY	0			HLCPTR				
SEPT 17	WHISKEY	300			BOAT		EXLNT		

OWIKENO LAKE 1985

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 06	MARBLE	1500		95	WALK			PINK 500, CHUM 10. LOTS OF BEAR SIGNS.
SEPT 26	MARBLE	600	200	45	WALK			PINK- 75 LIVE, 100 DEAD.
NOV 06	MARBLE							YEAR TOTAL- 2,800 SX; 600 PK; 10 CM.
AUG 29	NEECHANZ	1000						5-600 SX OBSERVED. REDDS DUG ALREADY
SEPT 06	NEECHANZ	3000	50	50	FLOAT	GLCL SILT	NORMAL	LOTS OF JACKS. 50 PK. 2 CK. 2 DEAD CM. LOTS OF BEAR SIGN.
SEPT 14	NEECHANZ	8000	300	75	W.FLOAT	TEA	NORMAL	LIVE- PK 400, CM 7, CK 3, CO 3. DEAD- 100 PK, 2 CK. MARBLE CRK 1000SX.
SEPT 17	NEECHANZ	5000		50	HLCPTR	GLCL SILT	BELOW NORM.	
SEPT 26	NEECHANZ	8500	1000	50	WALK	GLCL SILT	NORMAL	50-100 BEAR KILLS. COHO PRESENT.
OCT 01	NEECHANZ	1-2000			FLOAT	TEA-SILT	BELOW NORM.	
OCT 08	NEECHANZ	3-4000			FLOAT	CLEAR	EXT. LOW	FISH GREEN.
NOV 06	NEECHANZ	1500			HLCPTR	GLCL SILT	NORMAL	YEAR TOTAL- 34,200 SX; 1000 CO; 10 CK; 600 PK; 5 CM.
SEPT 08	SHEEMAHANT	27		95	SEINE	GLCL SILT	ABOVE NORM.	4 TST SETS- 14 F, 13 M, 6 COHO.
SEPT 17	SHEEMAHANT	2000		0	HLCPTR	GLCL SILT	NORMAL	REDDS IN ALL SUITABLE SITES. ESTIMATE >30,000 FISH IN RIVER.
SEPT 18	SHEEMAHANT	37		50	SEINE	GLCL SILT	BELOW NORM.	TST SETS- 9 F, 28 M, 3 CO, 1 CTHT, 1 DV.
OCT 01	SHEEMAHANT	500			HLCPTR	GLCL SILT	BELOW NORM.	NO NEW REDDS.
OCT 13	SHEEMAHANT				GILLNET		FLOOD	TRIP ABORTED.
NOV 06	SHEEMAHANT	50000	1-1500		HLCPTR	CLEAR-TEA	BELOW NORM.	3 BEAR. YEAR TOTAL 135,000 SX; 500 COHO.
SEPT 04	TZEO	8		100	GILLNET	GLCL SILT	ABOVE NORM.	TST SETS- 2 F, 6 M.
SEPT 11	TZEO	1300	40	75	WALK	GLCL SILT	BELOW NORM.	20 BEAR KILLS. 12 PK, 1 CK.
SEPT 17	TZEO	3000	N.A.	75	HLCPTR	CLEAR	NORMAL	
SEPT 23	TZEO	3500	500	10	WALK	SL. TURBID	BELOW NORM.	
OCT 01	TZEO	1000	N.C.	0	HLCPTR	CLEAR	EXT. LOW	
OCT 12	TZEO							NO COUNT DUE TO JET BOAT TROUBLE
OCT 06	TZEO	30		0	HLCPTR	CLEAR	BELOW NORM.	YEAR TOTAL 10,000 SX; 50 COHO; 12 PK.
OCT 05	WANNOCK				FLOAT		BELOW NORM.	SOCKEYE JUST DROPPING BACK TO ISLAND. 50 CK.
OCT 15	WANNOCK	19			SEINE	MUD-TURBID	FLOOD	GILLNET/SEINE- 14F, 5M, 2 CO, 4 CM. FISH GREEN.
NOV 06	WANNOCK	2-3000	2000		HLCPTR			LIVE- 8000CM, 1000+CK. DEAD- 1-1500CM. YEAR TOTAL 20,000 SX; 400 COHO.
SEPT 04	WASHWASH	8500	0	95	WALK	CLEAR	NORMAL	MAIN STEM- VERY LITTLE WATER. 100 PK.
SEPT 11	WASHWASH	23800	1500	70	WALK	CLEAR	BELOW NORM.	LIVE- 50PK, 1CM, 1CK. DEAD- 10PK.
SEPT 17	WASHWASH	25000	N.C.	80	HLCPTR	CLEAR	NORMAL	
SEPT 19	WASHWASH	27000	10000	75	WALK	CLEAR	BELOW NORM.	10,000+ OFF MOUTH. 3 COHO, 10 PK.
SEPT 28	WASHWASH	28000	15000	70	WALK	CLEAR	LOW	50+ DEAD DUE TO LOW WATER.
OCT 01	WASHWASH	15-20000		50	HLCPTR	CLEAR	EXT. LOW	5-10,000 OFF MOUTH; 10,000 BY INDIAN CABIN.
OCT 10	WASHWASH	29000	10000	75	WALK	CLEAR	ABOVE NORM.	INDUSTRY TOUR. 86,000 SX TTD.
NOV 06	WASHWASH	4000			HLCPTR	CLEAR	NORMAL	50 COHO. YEAR TOTAL 100,000 SX.

OWIKENO LAKE 1984- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 16	AMBACK				WALK	MUDDY	FLOOD	GOOD SHOWING IN FRONT OF CREEK. VISIBILITY POOR.
SEPT 24	AMBACK	2	4*		WALK	CLEAR	NORMAL	8 PK, *BEAR KILLS- 4 GRIZZLY SEEN, NO FISH MOVING IN YET.
OCT 02	AMBACK				WALK	TEA	ABOVE NORM.	DUE TO HEAVY RAIN, FISH JUST STARTED INTO SYSTEM
OCT 16	AMBACK	19000	2000	50	WALK	CLEAR	NORMAL	GOOD NUMBERS AT MOUTH (SCHOOLS 10000+)
NOV 08	AMBACK	1000-1300	150	90	WALK	CLEAR	ABOVE NORM.	200 COHO, 1 BEAR. FISH AT TOP END. INDUSTRY TOUR.
								FISH FROM BOTTOM TO TOP OF TRAIL. LOTS OF SNOW. 100 COHO.
								TOTAL FOR YEAR 25500SX,10PK,750CO,2CHUM.
SEPT 10	ASHLULM	1000			WALK	CLEAR	ABOVE NORM.	MAINLY GREEN, FEW JUMPERS AT MOUTH. 800 PINK (20 DEAD)-PEAK,
SEPT 22	ASHLULM	350-400	75	20	WALK	CLEAR	NORMAL	150-200 CHUM (3 DEAD)- RUN END.
SEPT 30	ASHLULM	500	20	100	WALK	CLEAR	NORMAL	80-100PK (10 DEAD). MOST FISH AT TOP RIVER BARS. 1 GRIZZLY.
OCT 12	ASHLULM	4500		95	WALK	CLEAR	NORMAL	15 PINK (2 DEAD); LOTS OF FISH AT MOUTH. 3 BLACKS & 1 GRIZZLY.
NOV 01	ASHLULM				1			BOTTOM BAR- SOME HIGH WATER SPAWN. INDUSTRY TOUR.
NOV 15	ASHLULM	150-200	10	0	WALK	CLEAR	VERY LOW	BOTTOM END - SNOW, NO FISH SEEN.
								ALL FISH AT BOTTOM OF RIVER.
								TOTAL FOR YEAR 7000SX, 900PK, 200CHUM.
SEPT 16	DALLERY				WALK	MUDDY	FLOOD	AREAS OF TRAIL SUBMERGED, IMPASSABLE. 2 JUMPERS AT MOUTH.
SEPT 21	DALLERY	5-6000	30	95	WALK	TEA	ABOVE NORM.	3% JACKS, SOME AT MOUTH. 1 PINK, 1 COHO JUMPER.
SEPT 25	DALLERY	2000		100	WALK			FISH IN DEEP POOLS ABOVE COHO POOL, GREEN. 50 COHO.
OCT 02	DALLERY				WALK	MUDDY	ABOVE NORM.	RIVER TOO HIGH, VISIBILITY POOR.
OCT 15	DALLERY	8000	500		WALK	CLEAR	ABOVE NORM.	A LOT OF HIGH WATER REDDS. 3 BEARS. INDUSTRY TOUR
NOV 07	DALLERY	300	200	0	1	CLEAR	NORMAL	LOTS OF SNOW. 2CO. TOTAL FOR YEAR 22000SX,500CO,50CHUM.
SEPT 06	GENESEE	3			WALK	CLEAR	NORMAL	80-100 PK, 2 CHUM
SEPT 19	GENESEE	1000		35	WALK	TEA	ABOVE NORM.	100-120 PK, 1 CHUM. GOOD SHOWING BY OLD CABIN SITE.
SEPT 27	GENESEE	800-1000	10	60	WALK	CLEAR	NORMAL	10 PK (5 DEAD). 1 GRIZZLY.
OCT 02	GENESEE	6000	30	95	WALK	CLEAR	NORMAL	10 PK (2 DEAD). FISH THROUGHOUT, COMING IN, SCHOOLING IN POOLS.
OCT 10	GENESEE	6500	100	50	WALK	CLEAR-TEA	ABOVE NORM.	1 COHO. INDUSTRY TOUR.
OCT 17	GENESEE	8500	2000	50	WALK	CLEAR	NORMAL	FISH THROUGHOUT. 3 COHO. INDUSTRY TOUR.
OCT 24	GENESEE	10000		80	WALK	CLEAR	NORMAL	5000 FISH HOLDING IN BOTTOM POOLS; 50-100 COHO.
NOV 14	GENESEE	950		0	WALK	CLEAR	VERY LOW	FISH MAINLY IN BOTTOM END; 150 COHO- THROUGHOUT.
								TOTAL FOR YEAR 23000 SX 150 CO.
SEPT 07	INZIANA	11000	400	50	WALK	CLEAR	NORMAL	BREAKTHROUGH- LESS WATER THAN IN OTHER YEARS.
SEPT 20	INZIANA	5-8000	100	40	WALK	GLCL SILT	ABOVE NORM.	WALK AND JETBOAT. NOT MANY JUMPERS IN ESTUARY.
SEPT 26	INZIANA	800-1000	50	20	WALK	CLEAR	BELOW NORM.	FISH ON BOTTOM & TOP BARS, VERY LITTLE IN BETWEEN
OCT 13	INZIANA				WALK	MUDDY	ABOVE NORM.	NO MORE SOCKEYE IN SYSTEM. INDUSTRY TOUR.
OCT 18	INZIANA	70	15	0	WALK	CLEAR	BELOW NORM.	54 COHO HOLDING IN SCHOOLS. SOCKEYE RUN END.
NOV 13	INZIANA		3	0	WALK	CLEAR	BELOW NORM.	50 COHO 1/2 WAY UP RIVER. 2-2 1/2 FT SNOW AT TOP.
SEPT 08	MACHMELL				JTBT	GLCL SILT	ABOVE NORM.	VISIBILITY NIL, 1 JUMPER, TEST SET 0 FISH
NOV 11	MACHMELL				4X4			SOME BIRDS. NO FISH NOR HIGH WATER REDDS SEEN. YEAR TOTAL 5000.

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OWIKENO LAKE 1984

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
AUG 23	NEECHANZ	900-1000		100	W,JTBT	GLCL SILT	NORMAL	A FAIR AMOUNT IN ESTUARY; 2 CHINOOK.
SEPT 08	NEECHANZ	2500-3000			W,JTBT	GLCL SILT	ABOVE NORM.	TST ST-8 M,5 F. 1 PK, 1 CM. 4-500 SX IN MARBLE CRK. 5 GRIZZLY.
SEPT 22	NEECHANZ	400	50	50	W,JTBT	GLCL SILT	NORMAL	FEW JUMPERS AT BOTTOM. MARBLE CRK 5-600 FISH, 55% NEW.
SEPT 28	NEECHANZ				W,JTBT	MUDDY		LARGE # FISH IN BOTTOM POOLS. TST ST- 10 M, 9 F.
OCT 14	NEECHANZ	500			W,JTBT	GLCL SILT	ABOVE NORM.	VIS. POOR, TEST SET #1)3 SX, 1 TROUT #2)2SX. INDUSTRY TOUR
OCT 23	NEECHANZ	2000		50	W,JTBT	CLEAR	BELOW NORM.	10 COHO, 1 CM. COHO IN BIG POOLS, SOCKEYE BOTTOM PART OF RIVER.
SEPT 09	SHEEMAHANT				F,JTBT	GLCL SILT	ABOVE NORM.	VIS. POOR, FISH AT MOUTH. TST ST- 1)1F,5M 2)1F,1M,2CO 3)3F,1M,3CO
SEPT 13	SHEEMAHANT				JTBT	GLCL SILT	NORMAL	TST ST-1)1F,3M,2CO. LOST 3SX,1CO. 2)1CO. 3)1M,2F,1CO. VIS. POOR.
SEPT 23	SHEEMAHANT				JTBT	SILT-MUD	NORMAL	TST ST-1)1M,1F,1CO 2)2M,1F,1CO 3)1M,1F,4CO 4)1F. 1 GRIZZLY.POOR VIS.
OCT 14	SHEEMAHANT	26			FLOAT	GLCL SILT	ABOVE NORM.	23 CO. TST ST-1)5SX,5CO 2)3SX,8CO 3)2SX,4CO 4)1SX,1CO 5)3SX,1CO
								6)2CO 7)2SX 8)2SX 9)5SX,2CO 10)3SX. POOR VIS. INDUSTRY TOUR.
OCT 28	SHEEMAHANT				HLCPTR	CLEAR		49 SX IN SIDE CHANNEL, 25 AT CHANNEL MOUTH. YEAR TOTAL 25000, 5 RUNS.
SEPT 13	SHORT FLATS	75-100			2			VIS. GOOD. NO FISH SEEN.
SEPT 20	SHORT FLATS				2	VIS. POOR		5 COHO
OCT 18	SHORT FLATS				2	VIS. POOR		
NOV 13	SHORT FLATS				2			LOTS OF SEALS. TTD 1100 SX.
SEPT 07	SUNDAY	20			2			NO FISH SEEN, SOME REDDS, SOME CARCASSES.
SEPT 12	SUNDAY	20-25			2			
SEPT 20	SUNDAY	25-30			2			
SEPT 26	SUNDAY	20			2			
OCT 18	SUNDAY	25			2			YEAR TOTAL 100 SX.
SEPT 07	3RD NARROWS	75		0	2			
SEPT 12	3RD NARROWS	300-400		0	2			
SEPT 20	3RD NARROWS	100-150		0	2	GLCL SILT	HIGH	
SEPT 26	3RD NARROWS	50-75		0	2			
OCT 18	3RD NARROWS	25		0	2			YEAR TOTAL 1000 SX.
SEPT 12	TZEO	1000-1200	20	50	WALK	GLCL SILT	NORMAL	TST ST- 1)8SX,4CO 2)6SX,1CO JACK. GOOD SHOWING IN ESTUARY.
SEPT 20	TZEO	300-400	12	5	WALK	GLCL SILT	ABOVE NORM.	FAIR VISIBILITY, SOME FISH IN ESTUARY.
SEPT 26	TZEO	450	15	85	WALK	CLEAR	BELOW NORM.	1 GRIZZLY, LOTS OF SAWBILLS.
OCT 11	TZEO	200	12	50	WALK	GLCL SILT	NORMAL	VISIBILITY FAIR. LOG JAM AT TOP STILL GROWING. INDUSTRY TOUR.
OCT 28	TZEO				HLCPTR			NO SOCKEYE SEEN.
OCT 17	WANNOCK				2	GLCL SILT	ABOVE NORM.	INDUSTRY TOUR. 6 TST STS-10CK,12CO,3CM. CK POOR SHOWING (EST. 150-200)
NOV 09	WANNOCK				2			POOR VIS. 35-40,000 SX.
								SX FROM SPRING POOL TO LAKE, # CARCASSES. 5000 CM.

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OWIKENO LAKE 1984

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 07	WASHWASH	4500-5000	200	60	WALK	CLEAR	ABOVE NORM.	1CO, 1PK, 1CM. SX RUN STARTING.
SEPT 20	WASHWASH	6000	200	60	WALK	CLEAR	NORMAL	5% JACKS, 4-500 HOLDING AT ENTRANCE OF OLD BED.
SEPT 26	WASHWASH	7500	1800	60	WALK	CLEAR	BELOW NORM.	LOW WATER/OXYGEN- 1200 DIED, 50% UNSPAWNED. +2500-3000 SX IN BREAKTHROUGH- GREEN, HOLDING IN DEEP POOLS.
OCT 13	WASHWASH	10000*	2100	50	1			*340 FISH IN OLD CHANNEL- WILL BE LOST. DEAD FRESH.
OCT 18	WASHWASH	2500	LOTS	15	WALK			INDUSTRY TOUR. WATER LOW IN NEW MAIN STEM- EXPECT TO LOSE FISH. TZEO BREAKTHROUGH- 2100 GREEN, FEW COHO.
NOV 11	WASHWASH	300		0	WALK	CLEAR	VERY LOW	FISH OLD. LOTS OF CARCASSES. 200 COHO. SNOW, EVIDENCE OF BEAR.
SEPT 07	WHISKEY	0			2			
SEPT 12	WHISKEY	40-50			2			
SEPT 20	WHISKEY	50-75			2			
SEPT 26	WHISKEY	75-100			2			
OCT 18	WHISKEY	50			2			YEAR TOTAL 300 SX.

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OWIKENO LAKE 1983- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 14	AMBACK	70	10		WALK	CLEAR	NORMAL	75-200,000 AT MOUTH. 25 PK, 10 DEAD. 1 CM(?). 2 GRIZZLY.
OCT 03	AMBACK	3300	N.O.	100	WALK	CLEAR	NORMAL	PREDATORS HIGH (BEAR, BIRDS, SEALS).
OCT 14	AMBACK	16500	2-3000	95	WALK	CLEAR	BELOW NORM.	20,000 SX TTD.
AUG 14	ASHLULM				WALK	CLEAR	NORMAL	2 PK, 25-30 CM.
SEPT 08	ASHLULM	8-9000	30	90	WALK	CLEAR	NORMAL	1 CK. 1 GRIZZLY.
SEPT 25	ASHLULM	6-7000	2000	60	WALK	CLEAR	NORMAL	LARGE SOCKEYE THROUGHOUT SYSTEM. 3-500PK. DEAD- 150PK, 1CM, 2CK.
OCT 09	ASHLULM	7000	2000	95	WALK	CLEAR	BELOW NORM.	1 CO, 1 PK; DEAD- 6 PK, 1 CM, 1 CK. 25-30,000 SX TTD.
OCT 18	ASHLULM	3750	N.C.	90	WALK	CLEAR	NORMAL	1 CM.
SEPT 09	DALLERY	5-6000	20	95	WALK	CLEAR	NORMAL	800-1000 PK, 1 CM, 2 CK; DEAD- 2 PK, 1 CK. HIGH BEAR PREDATION.
SEPT 29	DALLERY	14-15000	500	70	WALK	CLEAR	NORMAL	47.5% FEMALE. COHO PRESENT. 1 BEAR.
OCT 13	DALLERY	6000	1000	75	W,FLOAT	CLEAR	BELOW NORM.	4 COHO. YEAR TOTAL 35,000 SX.
AUG 14	GENESEE	0			WALK	CLEAR	BELOW NORM.	VIS. HIGH, NO FISH OBSERVED.
SEPT 02	GENESEE	0			WALK	CLEAR	NORMAL	1 CM; 40-50 PK, 5 DEAD.
SEPT 05	GENESEE	4		100	WALK	CLEAR	NORMAL	FISH HOLDING IN ESTUARY. 200 PK, 50 DEAD.
SEPT 12	GENESEE	400	0		WALK	CLEAR	NORMAL	FEW JACKS. 300 PK, 100 DEAD. 1 GRIZZLY.
SEPT 24	GENESEE	2250	3-400	90	WALK	CLEAR	BELOW NORM.	FISH IN ESTUARY. 900-1000 PK, 150 DEAD.
OCT 02	GENESEE	2331	1500	90	WALK	CLEAR	BELOW NORM.	2% JACKS. FISH IN ESTUARY. 200 PK, COHO N.O. PREDATION HIGH.
OCT 08	GENESEE	5000	3000	95	WALK	CLEAR	BELOW NORM.	9-10,000 TTD. 10 PK. PREDATION HIGH. INDUSTRY TOUR.
SEPT 03	INZIANA	10-12000	20	95+	WALK	GLCL SILT	NORMAL	VIS. POOR. 1 BLACK BEAR.
SEPT 11	INZIANA	5000	100	13	WALK	GLCL SILT	NORMAL	VIS. FAIR. 2 GTHT. BEAR.
SEPT 16	INZIANA	9-10,000	500		WALK	GLCL SILT	NORMAL	VIS. FAIR.
SEPT 21	INZIANA	7-8000	800		WALK	TEA	NORMAL	VIS. EXCELLENT. SOME FISH IN ESTUARY.
OCT 01	INZIANA	2200	N.C.	90	WALK	CLEAR	BELOW NORM.	MOD. # PRESPAWNING DEATHS DUE TO HIGH-LOW WATER.
OCT 10	INZIANA	800-1000	N.C.	N.A.	WALK	CLEAR	BELOW NORM.	YEAR TOTAL 33,000 SX. INDUSTRY TOUR.
SEPT 12	MACHMELL	1000	200		W,FLOAT	GLCL SILT	ABOVE NORM.	TST SETS- 3SX. 2 GRIZZLY. CLEAR CRK 1000-1200 SX.
AUG 14	NEECHANZ	3-500	0	100	W,FLOAT	GLCL SILT	ABOVE NORM.	VIS. POOR. 1 CK. MARBLE CRK- 2 PK, 4 CK.
SEPT 02	NEECHANZ	1800-2000		100	W,FLOAT	GLCL SILT	ABOVE NORM.	VIS. POOR. 1 CK, 1 DEAD. 2 GRIZZLY. MARBLE CRK- 7-800 SX.
SEPT 05	NEECHANZ				1,2			2 CK. 1 GRIZZLY.
SEPT 08	NEECHANZ	20-25000	500	75	W,FLOAT	CLEAR	NORMAL	3 CK, 4 DEAD.
SEPT 12	NEECHANZ	27			JTBT	DIRTY	HIGH	TST SETS. CARCASSES PRESENT. 2 GRIZZLY.
SEPT 24	NEECHANZ	8-10000	2500	50	W,JTBT	TEA	NORMAL	10 COHO. 4 DEAD CK. BEAR KILLS SLIGHT.
OCT 02	NEECHANZ	10400	N.C.	100	W,FLOAT	GLCL SILT	BELOW NORM.	5 COHO, 2 DEAD CK. MARBLE CRK- 825 SX, 95% NEW.
OCT 11	NEECHANZ	5300	2000	50	W,FLOAT	CLEAR	BELOW NORM.	20 COHO. 50,000 SX TTD. INDUSTRY TOUR.

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OWIKENO LAKE 1983

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 15	SHEEMAHANT	300-500	20	70	JTBT	GLCL SILT	NORMAL	VIS. POOR. TST SETS- 24 SX, 4 CO, 1 PK. 2 GRIZZLY.
OCT 11	SHEEMAHANT	2000	FEW	50	FLOAT	GLCL SILT	BELOW NORM.	5 COHO. 125,000 SX TTD. INDUSTRY TOUR.
OCT 01	SHMHT FLATS	2200		100	FLOAT	TEA	NORMAL	
OCT 11	SHMHT FLATS	3000			FLOAT	CLEAR	BELOW NORM.	10,000 TTD.
OCT 16	WANNOCK				SEINE			LARGE SX SCHOOLS. CK TST SETS- 80CK, 7CO, 10CM. INDUSTRY TOUR.
SEPT 03	WASHWASH	4500-5000	N.C.	95	WALK	CLEAR	NORMAL	SOME HOLDING IN ESTUARY.
SEPT 10	WASHWASH	2500	100	95	WALK	CLEAR	NORMAL	5% JACKS. FISH IN ESTUARY. 1 BLACK, 1 GRIZZLY & CUB.
SEPT 21	WASHWASH	4500-5000	1500	50	WALK	CLEAR	NORMAL	2% JACKS. LIVE- 1 CO, 4 PK, 2 CK; DEAD- 2 PK, 2 CK. 2 BLACK BEAR.
OCT 01	WASHWASH	6000	N.C.	85	WALK	CLEAR	BELOW NORM.	LIVE 2PK, CO N/O; DD 1CK, PK N/O. HIGH/LOW WATER MORT. 1 GRIZZLY.
OCT 10	WASHWASH	8500		75	WALK	CLEAR	BELOW NORM.	+1500 AT BREAKTHROUGH. 30,000 SX TTD. INDUSTRY TOUR.

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OWIKENO LAKE 1982- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 03	ASHLULM				1			
SEPT 07	ASHLULM				1			LOWEST POOL 200SX, 10PK (20% GREEN) REST CLOSE TO SPAWN. 1 DD CK.
SEPT 16	ASHLULM	2-2500	3-500		1	MUDDY	EXT. HIGH	TRAIL, BOTTOM BAR UNDER WATER.
SEPT 25	ASHLULM	3-400			1			LOWER BAR- HEAVY SAND LAYER. 2CM, 4CK, 1PK.
OCT 03	ASHLULM	2-2500	3-500		1			POOR SHOWING OF FISH.
OCT 09	ASHLULM				1			ALL GREEN, SMALL # MOVING UPRIVER. 1 DEAD CK.
OCT 16	ASHLULM	1000			1		HIGH	FEW FISH. BEAR TRACKS.
								INDUSTRY TOUR. LOW # FISH. TTD 15,000.
SEPT 22	DALLERY	12-15000	3-400		1			
SEPT 30	DALLERY	15-18000	3-5000		1			3 CK, 1 CO.
OCT 14	DALLERY	10000+			1	GOOD		GREEN-OLD, 70% GR. SOME LARGE SCHOOLS IN UPPER POOLS.
								INDUSTRY TOUR- LOTS OF FISH. TTD 60,000.
SEPT 03	GENESEE				1	CLEAR	LOW	
SEPT 10	GENESEE	300			1	CLEAR	HIGH	2 CM, 4 PK.
SEPT 14	GENESEE	400			1	CLEAR		6 PK.
SEPT 26	GENESEE	2-300			1	CLEAR		10 PK.
OCT 02	GENESEE	70-100			1	CLEAR	LOW	10 DEAD PK. HEAVY BEAR PREDATION.
OCT 09	GENESEE	6-700			1			2-300+ FISH GOING UP. 3 DEAD PK, 2 PK SPAWNING.
OCT 12	GENESEE	3500-4000			1			BEARS ABUNDANT.
								TTD 8,000.
SEPT 05	INZIANA	3-5000			1	SILTY	HIGH	
SEPT 14	INZIANA	8-10000			1	SILTY		JUMPERS IN UPPER BASIN, ONLY SHALLOW BARS COUNTED.
SEPT 24	INZIANA	12-15000	LOTS		1	SILTY		
SEPT 28	INZIANA	3-4000			1			GOOD SHOWING.
OCT 09	INZIANA				1			
OCT 13	INZIANA	500-2000			1		VERY HIGH	NO COUNT.
					1		HIGH	INDUSTRY TOUR. FEW FISH. TTD 40,000.
OCT 03	MACHMELL		10		2			
OCT 09	MACHMELL				2			NO OBSERVATIONS. TTD 80,000.
SEPT 06	NEECHANZ	1000			1,2	DIRTY	VERY HIGH	
SEPT 14	NEECHANZ	6-10000			1,2			MARBLE CRK- 200+ SX, 1 CK.
SEPT 25	NEECHANZ	1000			1,2	SILTY		4 DEAD CK.
SEPT 28	NEECHANZ	100	V. FEW		1,2			FAIR SHOWING OF JUMPERS IN POOLS.
SEPT 29	NEECHANZ	4000			1,2			LOWER END ONLY. 1 DEAD CK.
OCT 08	NEECHANZ	SCARCE			1,2	CLEAR		6-8 DEAD CK, 1 CM, 2 COHO CAUGHT.
OCT 16	NEECHANZ	100			1,2			2-300 COHO (ABUNDANT).
								TTD 50,000.
SEPT 18	SHEEMAHANT				2	DIRTY	HIGH	
SEPT 29	SHEEMAHANT	50-75000			2	VIS. FAIR		GOOD SHOWING IN LOWER REACHES.
OCT 09	SHEEMAHANT	35-50000			2	CLEAR		VERY GOOD SHOWING THROUGHOUT.
OCT 10	SHEEMAHANT				2	V. DIRTY		
								INDUSTRY TOUR- TST SETS 24 M, 28 F, 3 CO, 1CTHT. TTD 150,000.
SEPT 05	SHORT FLATS				2			
SEPT 14	SHORT FLATS				2	VIS. ZERO	HIGH	NO SIGN OF SPAWNING.
OCT 01	SHORT FLATS	200?			2			FISH JUMPING THROUGHOUT. FISHED 1.5 HRS- 34 SX.
OCT 09	SHORT FLATS				2			FISH PRESENT, NO SPAWNING ACTIVITY.
OCT 13	SHORT FLATS				2	DIRTY	HIGH	40-50 FISH VIS, NO ESTIMATE. SOME SPAWNING FISH.
								INDUSTRY TOUR- VERY LIGHT.

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OWIKENO LAKE 1982

DATE	STREAM	EST. NO. SOCKEYE			METHOD	WATER		COMMENTS
		LIVE	DEAD	%NEW		CONDITION	LEVEL	
SEPT 05	SUNDAY	50+			2			LOWER 50 FT OF CREEK.
SEPT 13	SUNDAY	50-75			2			SPAWNERS.
SEPT 16	SUNDAY	75-100	SOME		2			
OCT 01	SUNDAY	5+			2			LITTLE ACTIVITY.
OCT 09	SUNDAY	50-60			2			
OCT 13	SUNDAY	5			2			INDUSTRY TOUR. TTD 500.
SEPT 05	3RD NARROWS	150+			2			JUMPERS. NOT SPAWNING.
SEPT 14	3RD NARROWS	75-100			2			SPAWNERS.
OCT 01	3RD NARROWS	200-1000			2	DIRTY		FEW JUMPERS.
OCT 09	3RD NARROWS	200-1000			2			GOOD SHOWING.
OCT 14	3RD NARROWS	100+			2			INDUSTRY TOUR. TTD 5,000.
SEPT 05	TZEO				1			GOOD SHOWING OFF MOUTH.
SEPT 14	TZEO	12-15000			1			20 CK.
SEPT 26	TZEO	10-12000			1	CLEAR		GOOD SHOWING ON BARS. 3 DEAD CK, COHO PRESENT.
SEPT 28	TZEO	25000			1			
OCT 07	TZEO				1			LOWER END- FAIR SHOWING, FEWER UPSTREAM.
OCT 12	TZEO	2-2500			1	V. DIRTY		INDUSTRY TOUR. SOME FISH IN UPPER POOLS.
OCT 16	TZEO	2-3000			1			
SEPT 05	WANNOCK				2			JUMPERS, NO SIGN OF SPAWNERS.
OCT 02	WANNOCK				2			SX- LIGHT SPAWNING IN PROGRESS. NO CK SEEN.
OCT 07	WANNOCK	50000?			2			WANNOCK FLATS.
OCT 17	WANNOCK				2			INDUSTRY TOUR. TST STS SN-4CO, 4CK, 1CM. GN-20F SX,6M SX,1JK CO.
SEPT 05	WASHWASH	100	30		BT,WALK			70% GREEN, 30% OLD.
SEPT 06	WASHWASH	8000	5-1000		WALK	DIRTY	HIGH	50% SPAWNERS. 1 CK.
SEPT 13	WASHWASH	26-30000	3-5000		1			6 CK, 4 DEAD. SX CARCASSES WASHED OUT IN HIGH WATER.
SEPT 19	WASHWASH	3000			1			
SEPT 24	WASHWASH	25-30000			1		LOW	SX GREEN. >25,000 CARCASSES THROUGHOUT.
OCT 01	WASHWASH	16-22000	10000+		1		LOW	INCLUDES BREAKTHROUGH. 90% GREEN. 10-15,000 CARCASSES TOTAL.
OCT 06	WASHWASH				1			GOOD SHOWING.
OCT 13	WASHWASH	20000			1			INDUSTRY TOUR. INCLUDES BREAKTHROUGH. 1 CO. 1 WOLF. TTD 110,000.
SEPT 05	WHISKEY				2			NO SIGN OF SPAWNERS.
SEPT 13	WHISKEY	25-50			2			SPAWNERS.
OCT 01	WHISKEY	200?			2			50 OBSERVED.
OCT 09	WHISKEY	50+			2			
OCT 13	WHISKEY	50+			2			INDUSTRY TOUR. TTD 500.

1- NOT DOCUMENTED, ASSUMED WALKED
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OWIKENO LAKE 1981- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 16	AMBACK	100	100-150	1		HEAVY BEAR PREDATION.
SEPT 26	AMBACK			1	LOW	FISH COMING IN.
OCT 17	AMBACK	60000	17000	1		AVERAGE WATER LEVEL. SX-GREEN, 90% 5YRS.
OCT 28	AMBACK	50-60000		1		NO EVIDENCE OF HIGH WATER SPAWN.
NOV 14	AMBACK	15-20000		1		WATER LEVEL HIGH, SX GREEN.
SEPT 10	ASHLULM	2500-3000	300	1	HI/SILTY	PK 150-200, 10 CM, 3 DEAD CK.
SEPT 14	ASHLULM	3000		1		SX GREEN.
OCT 13	ASHLULM	3000		1		SX GREEN.
OCT 20	ASHLULM	3-3500		1	LOW	SX GREEN.
NOV 09	ASHLULM	1500-2000		1	HIGH	SX GREEN.
SEPT 11	DALLERY	1500-2000		1		FISH HOLDING IN LOWER POOLS. PK 1-1500, 2 CM, 2CK.
SEPT 20	DALLERY	2500		1		SX GREEN.
OCT 16	DALLERY	7-7500		1		90% 4YRS.
OCT 26	DALLERY	8-10000		1		
NOV 09	DALLERY	500		1		SX GREEN.
SEPT 01	GENESEE	4		1		70 PINK.
SEPT 03	GENESEE	25-50		1		80 PINK.
SEPT 15	GENESEE	25-40		1		100 PINK.
SEPT 29	GENESEE	500		1		50 PINK.
OCT 07	GENESEE	2500		1		
OCT 08	GENESEE	3000		1		
OCT 21	GENESEE	1-1500		1		
NOV 06	GENESEE	12-15000		1		100 COHO.
NOV 15	GENESEE	250-500		1		100-150 COHO.
SEPT 04	INZIANA	4-5000		1		
SEPT 14	INZIANA	500-600	400	1		CARCASSES IN BOTTOM HALF.
SEPT 15	INZIANA	5-6000	LOTS	1		SX GREEN.
OCT 09	INZIANA	5-10000		1		OLD.
OCT 11	INZIANA			1		NO NEW FISH.
SEPT 07	MACHMELL			2	HIGH	WATER VERY DIRTY.
SEPT 12	MACHMELL			2	DIRTY	

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OWIKENO LAKE 1981

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 07	NEECHANZ			1,2	V.HIGH	SPAWN GOOD.
SEPT 12	NEECHANZ		LOTS	1,2		50 PK.
SEPT 13	NEECHANZ	5-10000		1,2		
OCT 18	NEECHANZ	3-4000		1,2		
SEPT 30	SHEEMAHANT			2		SPAWN V. GOOD.
OCT 11	SHEEMAHANT			2	LOW/CLEAR	TTD 200000.
SEPT 15	SHORT FLATS	1000-1500		2	CLEAR	FISH HOLDING. NO EVID. OF LARGE # SPAWNERS.
SEPT 15	SUNDAY	50-75		2		
SEPT 15	3RD NARROWS	750-1000		2		
OCT 10	TZEO	3-5000		1	NORMAL	WATER CLEAR.
SEPT 15	WHISKEY	35		2		

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OWIKENO LAKE 1980- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 14	AMBACK	1000		1		
SEPT 23	AMBACK	1000		1		
OCT 10	AMBACK	60-65000		1		TTD 70-80000.
SEPT 14	ASHLULM	2000		1		
OCT 08	ASHLULM	2000		1		
OCT 13	ASHLULM	2-2500		1		TTD 4-6000.
SEPT 12	DALLERY	8-10000		1		
OCT 13	DALLERY	9-11000		1		TTD 22-27000.
SEPT 10	GENESEE	200		1		
SEPT 23	GENESEE	300		1		
OCT 06	GENESEE	3-3500		1		
OCT 14	GENESEE	3500		1		TTD 7500-9500.
SEPT 10	INZIANA	15-18000		1		
SEPT 30	INZIANA	3-4000		1		
OCT 07	INZIANA	2-2500		1		TTD 21-24000.
SEPT 10	LAKESHORE	1-200		2		3RD NARROWS AND BEACH SPAWNERS.
OCT 14	LAKESHORE	3-400		2		3RD NARROWS AND BEACH SPAWNERS.
SEPT 13	MACHMELL			2		
OCT 11	MACHMELL			2		TTD 15-20000.
SEPT 13	MARBLE	100		2		
SEPT 13	NEECHANZ	12-15000		1,2		
OCT 11	NEECHANZ	6-8000		1,2		TTD 30-35000.
SEPT 11	SHEEMAHANT	40-50000		2		
OCT 09	SHEEMAHANT	10000		2		TTD 50-60000.
SEPT 16	SMMHT FLATS			2	HI/DIRTY	
OCT 14	SMMHT FLATS			2	HI/DIRTY	TTD 5-7000.

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OWIKENO LAKE 1980

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 10	SUNDAY	100		2		
OCT 14	SUNDAY	300		2		TTD 500.
SEPT 30	TZEO	2000		1		TTD 3-3500.
SEPT 12	WANNOCK			2		
OCT 15	WANNOCK			2		TTD 25-35000.
SEPT 10	WASHWASH	5-6000		1		
SEPT 26	WASHWASH	2000		1		
OCT 07	WASHWASH	6-7000		1		TTD 13-15000.
SEPT 10	WHISKEY	50		2		
SEPT 22	WHISKEY	50		2		
OCT 14	WHISKEY	500		2		TTD 1500-2000.

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OWIKENO LAKE 1979- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 13	AMBACK	FEW		1	LOW	GRIZZLY PRED. HIGH.
SEPT 22	AMBACK	900		1		
OCT 05	AMBACK	12-15000		1		
OCT 15	AMBACK	15-16000	9-10000	1	LOW/CLEAR	
SEPT 13	ASHLULM	3000		WALK		
OCT 08	ASHLULM	500		1		
OCT 13	ASHLULM	7-7500	MANY	WALK	LOW	TTD 13-15000. EXLNT SPAWNING CONDITIONS.
SEPT 14	GENESEE	20-30		WALK		3-400 PK SEEN EARLY SEPT.
SEPT 21	GENESEE	250		WALK		
OCT 03	GENESEE	3000		1		
OCT 11	GENESEE	1800		WALK		TTD 5000.
SEPT 12	INZIANA	18-20000		1		VIS. POOR.
OCT 10	INZIANA	1000		1	FAIR-GOOD	VIS. POOR, GLCL SILT. SPAWN CONDITIONS EXLNT.
SEPT 25	LAKESHORE	300		2		FEW FISH SEEN EXCEPT FOR SUNDAY CRK.
OCT 10	LAKESHORE			2		VIS. FAIR. TTD 5-700.
OCT 14	MACHMELL			JTBT		TTD 30-40000. 1-2000 COHO.
SEPT	NEECHANZ	20000		JTBT	LOW	
OCT	NEECHANZ	12-15000		1,2	FAIR/GOOD	TTD 40-45000. SPAWN COND., COHO ESC. GOOD. MARBLE CRK 2-300 FISH.
SEPT	SHEEMAHANT			JTBT		SPAWN LIGHT.
SEPT	SHMHT FLATS	2000		2		VIS. POOR.
OCT	SHMHT FLATS	6-7000		2		TTD 9000. NO COHO OBSERVED.
SEPT 17	TZEO	1500-2000		1	SILTY	
OCT 11	TZEO	500-1000		1	SILTY	VIS. FAIRLY GOOD.
OCT 13	WANNOCK			BOAT		VIS. POOR DUE TO WINDS.
OCT 16	WANNOCK			2		TTD 30-40000. CK SN- 14M, 17F (>25LBS) EST. 3500TTD, 20CO, 1CM.
SEPT/OCT	WASHWASH			1		TTD 15000. EXLNT SPAWN COND. 1-200 COHO.
OCT 10	WHISKEY	1500		2	GOOD	

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OWIKENO LAKE 1978- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 15	AMBACK	4-600		1		SHOWING NOT GOOD.
OCT 01	AMBACK	6000		1	HI/CLEAR	FEW PK.
OCT 15	AMBACK	13000	4000	1	VIS. EXLT	MOSTLY GREEN. 2% JKS, 90-95% 5YRS. TTD 20-25,000.
SEPT 15	ASHLULM	8-10000		1		
OCT 01	ASHLULM	7000		1	HI/CLEAR	
SEPT 17	DALLERY	4000		1		1 GRIZZLY.
SEPT 28	DALLERY		50	1		FEW FISH IN RIVER. 2 BEAR SEEN.
OCT 04	DALLERY	7500		1		12 JACKS. BLACK BEAR TRACKS.
SEPT 11	GENESEE	200		1		600 PK.
SEPT 18	GENESEE	6-800		1		600 PK.
SEPT 11	INZIANA	20000		1		
OCT 13	INZIANA	1800-2000		1	NORMAL	TOTAL ESCAPEMENT EST. 30-35,000, 95% 5YRS.
OCT 14	MACHMELL			2	VIS. POOR	TST SETS-4F, 3M, 2CO, 1CTTHT. FISH FRESH. CLEARWATER CRK-300SX.
SEPT 11	NEECHANZ	10000	SOME	1,2		
OCT 14	NEECHANZ	2-3000	LOTS	1,2	NORM-HIGH	TTD 15-18,000, 85-90% 5YRS. MARBLE CRK 600SX.
SEPT 14	SHEEMAHANT	20-25000		2		VERY GREEN ABOVE FENCE.
SEPT 27	SHEEMAHANT		50	2		
OCT 12	SHEEMAHANT	1700-3000	LOTS	2	NORMAL	TOTAL ESCAPEMENT EST. 125-150000, 95% 5YRS.
OCT 06	SHMHT FLATS	1000		2		
SEPT 13	SUNDAY	600		2		
OCT 13	SUNDAY	5-700		2		TTD 1200-1500.
SEPT 13	3RD NARROWS	50		2		
OCT 13	3RD NARROWS	700-1000		2		
SEPT 13	TZEO	3000		1		
OCT 06	TZEO	3000		1	POOR VIS.	WOLF, BEAR TRACKS. BALD AND GOLDEN EAGLES.
OCT 13	TZEO	2-3000		1		TOTAL ESCAPEMENT EST. 9-10,000, 85% 5YRS.
SEPT 12	WASHWASH	12-15000		1		
OCT 02	WASHWASH			1		20 FISH SEEN STRANDED ON GRAVEL BAR.
OCT 06	WASHWASH	30000		1		
OCT 13	WASHWASH	16000	16000+	1	HIGH	LOOSE EGGS. GREEN FISH AT MOUTH. TTD 55-65,000 95% 5YRS.
SEPT 13	WHISKEY	200		2		
OCT 06	WHISKEY	1000		2		FISH AT MOUTH.
OCT 13	WHISKEY	150		2		TTD 3-500.

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OWIKENO LAKE 1977- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 13	AMBACK	6		1	LOW	VIS. EXLNT. SPAWN LIGHT. 2 PK.
SEPT 13	ASHLULM	1000		1	NORM-LOW	VIS. EXLNT. SPAWN LIGHT 50-60% 5YRS. 200PK, 10CM, 2CK.
SEPT 13	DALLERY	6-8000		1	NORM-LOW	VIS. EXLNT. SPAWN LIGHT-MED 70% 5YRS. 250 PK, 10 CM, 30 CK.
SEPT 01	GENESEE	6		1	LOW	
SEPT 14	GENESEE	2	12	1		SPAWN POOR.
SEPT 01	INZIANA	3000		1		
SEPT 12	INZIANA	2000		1	NORM-LOW	VIS. GOOD. TTD 5000 (POOR) ALL 5YRS. TOTAL SHOULD BE 35000.
SEPT 16	NEECHANZ	1000-1200		1,2	LOW	VIS. POOR. TTD 2000 60% 5YRS. 3CK, 3CO. MARBLE CRK NO FISH.
SEPT 16	SHEEMAHANT			2	NORM-LOW	VIS. POOR. TTD 10-15000 MAINLY 5YRS.
SEPT 17	SMOKT FLATS			2	NORMAL	VIS. POOR. TTD 4-5000 60% 5YRS. 25-50 COHO.
SEPT 12	TZEO	3000	<150	1		TTD 4000 80-90% 5YRS, REST 4YRS. 15 CK- EST. 30-50.
SEPT 01	WASHWASH	7000		1	NORMAL	VIS. EXLNT. FISH GREEN. BREAKTHROUGH WATER VERY LOW.
SEPT 12	WASHWASH	12500	5000	1		TTD 20-25000 80-90% 5YRS. 6CK.

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OWIKENO LAKE 1976- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 19	AMBACK	5-700		1		AT RIVER MOUTH.
OCT 16	AMBACK	45000	MANY	WALK	NORMAL	TTD 65-75000 (HEAVY), 60% 4YRS, 40% 5YRS, TRACE JACKS.
SEPT 18	ASHLULM	1200-1500		1	HIGH	VIS. GOOD. MAINLY 5 YRS.
OCT 14	ASHLULM	500		1	NORMAL	VIS. GOOD. TTD 3-5000 (LIGHT) 50% 5YRS, 50% 4YRS.
SEPT 19	DALLERY	3-5000		1	LOW	VIS. GOOD. MOSTLY 5 YRS.
OCT 17	DALLERY	5000	FEW	1	LOW	TTD 12-15000 (LIGHT), 70% 4 YRS, 30% 5 YRS, TRACE JACKS.
SEPT 14	GENESEE	300		1		
OCT 05	GENESEE	1000		1		SPAWNING STARTED.
OCT 12	GENESEE	1500		1	NORMAL	VIS. GOOD. 50/50 OLD/NEW FISH. 75% 4YRS, 25% 5YRS, TRACE JACKS.
OCT 19	GENESEE	1000		1	NORMAL	VIS.GOOD. TTD 2-2500(LIGHT) 80%4YRS TR.3YRS 20%5YRS. HI BEAR PRED
SEPT 15	INZIANA	20000		1	HIGH	VIS. POOR. MAINLY 5YRS.
OCT 18	INZIANA	50		1	NORMAL	VIS. GOOD. TTD 20-25000 (LIGHT), MAINLY 5YRS.
SEPT 18	NEECHANZ	10-12000		1,2	HIGH	VIS. GOOD. TST SET 7F, 3M.
SEPT 21	NEECHANZ	15000		PLANE		
OCT 14	NEECHANZ	3-4000	V. FEW	SMKCFT	HIGH	VIS. POOR. TTD 20-25000 (MED) MAINLY 5YRS.
OCT 18	MACHMELL	SOME	SOME	PLANE	HI/SILT	VIS. POOR. TTD 5-10000 (LIGHT).
SEPT 17	SHEEMAHANT	300		2	NORMAL	VIS. POOR- SILT. TST SETS- 2F, 1M, 1CO.
OCT 05	SHEEMAHANT			2		MOST SPAWNERS IN LOWER 4 MILES.
OCT 15	SHEEMAHANT		FEW	2	HI/SILTY	VIS. POOR. TST SETS- 3F, 4M.
OCT 19	SHEEMAHANT	2000		SMKCFT	LOW/SILT	TTD 20-25,000 (LIGHT), 80% 5YRS.
SEPT 15	SHORT FLATS			2	VIS. POOR	
SEPT 21	SHORT FLATS	1000		AIR		
OCT 19	SHORT FLATS	5000	MANY	SMKCFT	LOW	VIS. GOOD.
SEPT 15	SUNDAY	10		2		
OCT 18	SUNDAY	150	FEW	2	LOW	VIS. GOOD.
SEPT 15	3RD NARROWS			2		NO SOCKEYE.
OCT 18	3RD NARROWS	700-1000		2		LAKESHORE SPAWN TTD 15-20,000 (MEDIUM), 90% 5YRS.
SEPT 16	TZEO	7-8000		1	HIGH	VIS. POOR.
OCT 18	TZEO	150	FEW	1	LOW	VIS. GOOD. SPAWN OVER. TTD 10-12,000 (LIGHT-MED) MAINLY 5YRS.
OCT 19	WANNOCK	GOOD #		2		TTD 75-100000 (HEAVY) TST SETS-17F, 8M.
SEPT 15	WASHWASH	7500-8000		1	NORMAL	VIS. GOOD. MAINLY 4YRS.
OCT 13	WASHWASH	3000	FEW	1	HIGH	VIS. POOR. 5-700 IN LOWER BREAKTHROUGH.
OCT 18	WASHWASH	4500-5000	V. FEW	1	NORMAL	VIS. GOOD. TTD 15-20,000 (LIGHT) 50/50 4/5 YRS.
SEPT 15	WHISKEY	50		2		
OCT 18	WHISKEY	3-500		2		

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OWIKENO LAKE 1975- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 16	AMBACK			1		30-40 IN LOWER MILE, 10'S OF 1000'S OFF MOUTH.
LATE SEPT	AMBACK	8-10000		1		SEPT 29 HUNDREDS OF LARGE COHO FRY OBSERVED.
LATE OCT	AMBACK	8-10000		1		MANY GREEN. TTD 50-60000.
SEPT/OCT	ASHLULM	5-6000		1		SPAWN LIGHT. HEAVY PREDATION.
SEPT 08	DALLERY	5-8000		F,AIR		
SEPT 16	DALLERY	12000		WALK		THOUSANDS HOLDING IN OWIKENO. 30 CK.
OCT 02	DALLERY	10000		1		
OCT 16	DALLERY	5000		1		SPAWN LEVEL HIGH.
SEPT/NOV	GENESEE			1		TTD 15000 (MOD)- SPAWN SEPT 14-OCT. 50 PK, SOME CO.
SEPT 05	INZIANA	30000		1		
LATE SEPT	INZIANA			1		TTD 50-60000. LOW WATER LEVELS EXPOSED REDDS 1-1500F AFFECTED.
SEPT/OCT	LAKESHORE			2		TTD 8-12000.
SEPT 14	MACHMELL			JTBT		
SEPT 18	MACHMELL	5-10000		HLCPTR		VIS. LOW.
SEPT 14	NEECHANZ	20000		JTBT		SPAWN BEGAN LATE AUG. MARBLE CRK 200.
SEPT 18	NEECHANZ			HLCPTR		
OCT 19	NEECHANZ			1,2		TTD 40-45000. SPAWN CONT. AT THIS DATE.
SEPT/OCT	SHEEMAHANT			JTBT HLCPTR		TTD 30-40000 (LIGHT). KULL CRK 200-400.
SEPT/OCT	SIMMT FLATS			2		TTD 75-100000. MORE THAN 400 COHO.
SEPT 18	TZEO	12000		WALK HLCPTR		5000 SX BELOW BREAKTHROUGH. APPROX. 50 CK.
SEPT/OCT	WANNOCK	75-100000		VISUAL GN		SPAWN MOD. 80% 4YRS. 3000CK, 3-6000CM, UNK # PK OR CO.
SEPT 05	WASHWASH	8-10000		1		
LATE OCT	WASHWASH			1		TTD 35-50000. 20-30CK, 50CO OFF MOUTH. 2 FRESHETS OCT/NOV.

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OWIKENO LAKE 1974- DAILY RECORD OF SOCKEYE ESCAPEMENTS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 16	AMBACK			1	LOW/CLEAR	TTD 700-800 (LIGHT), SCHOOL OFF MOUTH. 5-7000 PK TTD.
SEPT 16	ASHLULM			1	NORMAL	TTD 6-7000 (SEPT 4TH EST. 2-3000). 2-3000 PK TTD.
SEPT 16	DALLERY			1	NORMAL	TTD 15000 (V.GOOD) 90%5YRS,10%4YRS, TR. JK. 2CK, 1DD CM, 3-4000PK
SEPT 15	GENESEE	150-170		1	NORM-LOW	5-600 PK.
SEPT 13	INZIANA			1	>NORMAL	VIS. POOR. TTD 30-40000 (EXLNT).
SEPT 10	LAKESHORE	3100-3800		2		SUNDAY CRK 25-3000, WHISKEY 5-600, SHMHT FLATS 1-200.
SEPT 17	LAKESHORE			2		TTD 5-7000. SHMHT FLATS FAIR NUMBER.
SEPT 15	MACHMELL			2	HIGH/SILT	TTD 5-10000.
SEPT 15	NEECHANZ			1,2	>NORMAL	VIS. FAIR. TTD 30-40000 (HEAVY) MAINLY 5YRS. 2CK, 11DD CK. MARBLE CRK- 2500SX, 4CK, 13DD CK, 800-1000PK.
SEPT 14	SHEEMAHANT			JTBT	HIGH	VIS. POOR- GLCL, SILTY. TTD 75-100000 (MED-HEAVY).
SEPT 12	TZEO			HLCPTR		LOWER REACHES VIS. POOR. GOOD SHOWING THROUGHOUT.
SEPT 13	TZEO			1		VIS. FAIRLY GOOD. TTD 25-30000 (GOOD) MAINLY 5YRS.
SEPT 18	WANNOCK			2		GOOD SHOWING, MAINLY 4YRS. PKS PRESENT.
SEPT 13	WASHWASH	41000		1		TTD 45-50000 90% 5YRS, 10% 4YRS, TRACE JACKS.

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OWIKENO LAKE 1973- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 22	AMBACK	8-10000	3000	1	LOW/CLEAR	FISH OFF MOUTH, 25% 4YRS, JKS PRESENT. GROUPS OF 3-400 IN POOLS.
OCT 15	AMBACK	35000		1	NORMAL	TTD 60-65000 (HEAVY) RUN ENDING. PREDATION BY BEAR, WOLF, BIRDS.
SEPT 21	ASHLULM			1	NORMAL	TTD 15-20000 (MED) MOSTLY 5YRS. DEAD AT MOUTH. 1 LARGE DD CK.
OCT 17	ASHLULM			1	>NORMAL	TTD 25-30000 (HEAVY). WATER DISCOLOURED.
SEPT 22	DALLERY	10-15000		1		STRONG EARLY START, 50:50 4-5YRS, SMALL. 1 CK, 1 DEAD CK.
OCT 16	DALLERY	6000		1	>NORMAL	TTD 20-25000 (MED).
SEPT 13	GENESEE	5000	FEW	1	NORMAL	RUN MED EQUAL # 4-5YRS, TRACE JK. 2-300 BELOW WEIR, TRACE PK.
OCT 17	GENESEE	25000		1	>NORMAL	TTD 40-50000 (VERY HEAVY).
SEPT 12	INZIANA			1	>NORMAL	VIS. POOR. ALL AREAS WELL USED, MOSTLY LARGE 5YR M, FEW JKS.
SEPT 20	INZIANA			HLCPTR	NORMAL	TTD 100-150000 (V. HEAVY) MOSTLY 5YRS, 20% 4YRS, TRACE JACKS.
OCT 12	INZIANA	15000		1	NORMAL	RUN END TTD 150-170000.
SEPT 11-22	LAKESHORE	5-10000		BOAT, HLCPTR	HIGH	EARLY VIS. POOR. SHOAL FLATS LIGHT; SUNDAY, WHISKEY, 3RD NARROWS GOOD SPAWN.
OCT 12	LAKESHORE			2	LOW	TTD 10000(HEAVY). SHOAL FLATS LIGHT; SUNDAY, WHISKEY, 3RD NARROWS WELL SEEDED.
SEPT 14	MACHMELL			SMKCFT		SPAWN IN SIDE CHANNELS. TST SETS- 5M, 1F.
SEPT 20	MACHMELL			HLCPTR		TTD 10-15000 (HEAVY). SPAWN IN ALL CHANNELS OF DELTA.
OCT 19	MACHMELL			2		TTD 10-15000.
SEPT 14	MARBLE	5000		1		FISH AND FRY STRANDED- CHANGE IN RIVERCOURSE.
SEPT 14	NEECHANZ	EVIDENT	EVIDENT	1,2	>NORMAL	GOOD SEEDING, HIGH LEVEL SPAWN. 1 CK, 2 OLD CK.
SEPT 15	NEECHANZ			1,2		TTD 50000 (HEAVY) INCL. MARBLE. 6 CK. MARBLE 100 CO FRY RELEASED.
SEPT 20	NEECHANZ			HLCPTR		LITTLE OR NO SX ABOVE CASCADES.
OCT 19	NEECHANZ			1,2	>NORMAL	TTD 50000 (HEAVY) INCLUDES MARBLE, RUN END.
SEPT 05	SHEEMAHANT			PLANE		POOR VIS.
SEPT 16	SHEEMAHANT			SMKCFT	LOW/GLCL	TTD 150000. TST SETS- 65SX, 17CK, 2CK JK. SEPT 20 HLCPTR.
OCT 18	SHEEMAHANT			2	>NORM,MUD	TTD 250000+ (VERY HEAVY).
SEPT 15	TZEO			1	>NORM,GLCL	LOWER TZEO HEAVILY SEEDED, UPPER PERIODIC. SOME HI LEVEL SPAWN.
SEPT 20	TZEO			HLCPTR		VIS. EXLNT. TTD 40-50000 (HEAVY). 13 CK.
OCT 12	TZEO			1	NORMAL	TTD 60-65000 (HEAVY), LARGE SCHOOL OFF MOUTH.
SEPT 17	WANNOCK			2	HIGH	SX JUMPING.
SEPT 21	WANNOCK			HLCPTR SMKCFT	DROPPING	VIS. POOR. LITTLE SX ACTIVITY. SOME CK.
SEPT 23	WANNOCK			SMKCFT		LARGE SCHOOL IN LAKE. RIVER LEVEL 7.5'.
OCT 14	WANNOCK			2		SX IN UPPER RIVER. CK NETTING- GOOD, CM AND CO CAUGHT ALSO.
OCT 15	WANNOCK			2		TTD 35000 (LIGHT) MAIN MIGRATION STILL EXPECTED.
SEPT 13	WASHWASH	EVIDENT	EVIDENT	1	LOW	HIGH WATER SPAWN. 5YRS MOSTLY. 1 DEAD CK.
SEPT 20	WASHWASH			HLCPTR		TTD 100000 (V. HEAVY) SPAWN BED UTILIZ. HIGH.
OCT 13	WASHWASH	30000		1		TTD 200000 (HEAVY). LARGE SCHOOL HOLDING IN TZEO.

1- NOT DOCUMENTED, ASSUMED WALKED
2- NOT DOCUMENTED, ASSUMED BOATED

OWIKENO LAKE 1972- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 08	AMBACK	60		1		1000 FRESH PK.
SEPT 19	AMBACK	300		1	LOW	FEW PINKS.
OCT 06	AMBACK	15-20,000		1	NORMAL	
OCT 17	AMBACK	35-40000		1	LOW	TTD 50-55,000 (HEAVY), 60% 4YRS, 30% 5YRS, 10% 3YRS.
SEPT 08	ASHLULM	200		1		20 PINKS.
SEPT 14	ASHLULM	700		1		25-50 PK, 2 CM.
SEPT 24	ASHLULM	500		1		FEW FISH HOLDING. 50 PK, 3 CM.
OCT 14	ASHLULM	4-500		1		MOSTLY OLD FISH.
OCT 17	ASHLULM	350		1		MOSTLY OLD. TTD 1500(VERY LIGHT), MOST 4YRS, SOME 5YRS, 10% 3YRS.
SEPT 01	DALLERY			1		4-5000 PK, 50-70 CK, FEW STHD.
SEPT 18	DALLERY	2-3000		1		FEW OLD PKS AND CK.
OCT 16	DALLERY	4-5000	FEW	1		TTD 8-10,000 (VERY LIGHT), 50% 5YRS, 50% 4YRS, TRACE 3YRS.
SEPT 13	GENESEE	70-100		1	LOW	20-50 PK, 1 CM.
OCT 07	GENESEE	9-10,000		1	LOW	GOOD COVERAGE TO FALLS.
OCT 10	GENESEE	18-20,000	FEW	1	NORMAL	ESC. MED-HEAVY. 30% 5YRS, 50% 4YRS, 20% 3YRS.
OCT 15	GENESEE	13000	GOOD #	1	LOW/CLEAR	TTD 25-30,000.
SEPT 15	INZIANA	500	FEW	1		FISH MOSTLY OLD.
SEPT 28	INZIANA	3-500		1		NO FISH HOLDING.
OCT 11	INZIANA	100+		1		ESC. LIGHT. TTD 1-1500, MAINLY 4 YRS.
OCT 14	MACHMELL			2	LOW,SILT	ESC. UNKNOWN. POSSIBLY 2-3,000.
AUG 23	NEECHANZ	1-2000		1,2		
SEPT 14	NEECHANZ			1,2	HI,SILT	NO COUNT. FEW CK.
SEPT 28	NEECHANZ	1500-2200		1,2		
OCT 06	NEECHANZ	1000		1,2		VERY FEW HOLDING IN POOLS.
OCT 15	NEECHANZ	1-1500		1,2		TTD 3500-4000 (VERY LIGHT), MOSTLY 5 YRS. MARBLE CRK 300-350.
SEPT 16	SHEEMAHANT	20-30,000		2		TST SETS- 24 SX, 1 CO.
OCT 13	SHEEMAHANT			2		TTD 30-35,000, MOSTLY 4 YRS. TST SETS- 10 M, 2 F, 2 CO.
SEPT 14	SHMHT FLATS			2		GOOD SHOWING.
OCT 07	SHMHT FLATS			2		FEW FISH SHOWING.
OCT 11	SHMHT FLATS	500+		2		# REDDS NEAR CABIN. SPAWN MEDIUM -MOSTLY 4 YRS. FEW COHO.

1- NOT DOCUMENTED, ASSUMED WALKED
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OWIKENO LAKE 1972

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 14	SUNDAY	400		2		
OCT 07	SUNDAY	1000		2		MOSTLY OLD FISH.
OCT 11	SUNDAY	200		2		MOSTLY 4 YRS.
OCT 07	3RD NARROWS	1500		2		
SEPT 25	TZEO	4-6000		1		
OCT 11	TZEO	3-500		1		FISH OLD SPAWN OVER. TTD 1-1500(V. LIGHT) 50/50 4-5YRS, TR. 3YRS.
JULY 03	WANNOCK			2		SX ENTERING RIVER, IFF GOOD. SX AVG. WT=3LBS.
JULY 30	WANNOCK			2		PEAK RUN ENTERED BETWEEN JULY 12-JULY 30.
AUG 25	WANNOCK			2		NO FISH ON FLATS, MAIN RUN IN LAKE AND UPPER RIVERS.
SEPT 12	WANNOCK			2		FEW FISH SHOWING ON FLATS.
SEPT 29	WANNOCK			2		TO OCTOBER 8 -POOR SHOWING ON FLATS.
OCT 16	WANNOCK			2		TTD 25-30,000 (LIGHT-MED). LATER INDIC. FINAL ESC. MAY BE HIGHER.
AUG 22	WASHWASH	500		1		BREAKTHROUGH.
SEPT 06	WASHWASH			1		FEW FISH IN RIVER MOUTH.
SEPT 14	WASHWASH	5-7000	500	1		BREAKTHROUGH. FEW FISH IN MAIN RIVER.
OCT 06	WASHWASH	3-4000	2-3000	1		FISH MOSTLY OLD.
OCT 12	WASHWASH	4000		1		BREAKTHROUGH. TTD 20-25,000 (LIGHT), 50% 4YRS, 45% 5YRS, 5% 3YRS.
SEPT 14	WHISKEY	300		2		
OCT 07	WHISKEY	700		2		
OCT 11	WHISKEY	100		2		MOSTLY 4 YRS.

1- NOT DOCUMENTED, ASSUMED WALKED
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OWIKENO LAKE 1971- DAILY RECORD OF SOCKEYE ESCAPEMENT SURVEYS

DATE	STREAM	EST. NO. SOCKEYE		METHOD	WATER CONDITION	COMMENTS
		LIVE	DEAD			
SEPT 14	AMBACK	100		1		
SEPT 27	AMBACK			1		TTD 1-300.
OCT 16	AMBACK	30-35000		1		
NOV 03	AMBACK	20000		1		TTD 50-65000.
NOV 08	AMBACK	500-1000		1		TTD 50-65000.
SEPT 21	ASHLULM	500-800		1		
SEPT 27	ASHLULM	300		1		TTD 1000-1500.
OCT 17	ASHLULM	75-100		1		TTD 1200-1500.
SEPT 16	DALLERY	5000-6000		1		
OCT 11	DALLERY	8000-10000		1		
OCT 17	DALLERY			1		TTD 15-20000.
NOV 01	DALLERY	500-800		1		TTD 15-25000.
SEPT 13	GENESEE	1500-2000		1		
OCT 09	GENESEE	8-10000		1		TTD 10-20000.
OCT 15	GENESEE	18-20000		1		TTD 30-40000.
NOV 01	GENESEE	15-20000		1		TTD 45-60000.
SEPT 12	INZIANA	1500-2000		1		
OCT 15	INZIANA	15		1		
OCT 17	INZIANA			1		TTD 2-5000.
SEPT 11	LAKESHORE			2		SPAWN LIGHT.
SEPT 20	LAKESHORE	250-400		2		
SEPT 27	LAKESHORE			2		TTD 3-500.
OCT 10	LAKESHORE	1-5000		2		
NOV 08	LAKESHORE			2		SX PRESENT. TTD 5-10000.
SEPT 13	NEECHANZ	1500-2000		1,2		
SEPT 27	NEECHANZ			1,2		TTD 3-5000.
OCT 15	NEECHANZ	0		1,2		TTD 3-5000.
SEPT 17	SHEEMAHANT	2000-5000		2		
OCT 12	SHEEMAHANT	500-1000		2		
NOV 11	SHEEMAHANT	100-300		2		TTD 5-10000.
SEPT 20	TZEO	800-1000		1		
OCT 10	TZEO	25		1		
OCT 17	TZEO			1		TTD 1000-1200.
OCT 19	WANNOCK			2		GOOD RUN.
OCT 23	WANNOCK			2		STRONG RUN.
NOV 16	WANNOCK			2		GOOD RUN.
NOV 18	WANNOCK			2		TTD 50-100000. FLATS GOOD.
SEPT 12	WASHWASH	350		1		
SEPT 18	WASHWASH	2500-3200		1		
OCT 14	WASHWASH	3500-4000		1		
OCT 17	WASHWASH			1		TTD 7-10000.
NOV 10	WASHWASH	300		1		TTD 8500-12000.

1- NOT DOCUMENTED, ASSUMED WALKED
2- NOT DOCUMENTED, ASSUMED BOATED

PART V

The daily record of the Owikeno Lake water levels at the Genesee River field camp is detailed for the years 1982-1987.

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1987

DATE	LEVEL (FT) AM	PM	WEATHER
SEPT 07	11.6		SUN
SEPT 08	11.4		SUN
SEPT 09	11.5		SUN
SEPT 10	11.3		SUN
SEPT 11	11.4		AM-FOG, WESTERLY PM-SUN, RAIN AT NIGHT
SEPT 12	11.5	11.5	AM- LOW FOG, CALM PM-RAIN, NW
SEPT 13	11.5	11.4	AM-HG CLOUD, CALM PM-RAIN, LIGHT SE
SEPT 14	11.4	11.5	RAIN, CLOUD, SE
SEPT 15	11.8	12.2	RAIN, CALM
SEPT 16	12.0	11.8	AM-CALM, LIGHT RAIN PM-HG OVERCAST
SEPT 17	11.4	11.3	HIGH OVERCAST, SE, RAIN
SEPT 18	11.1	11.0	LOW OVERCAST, CALM, RAIN PM-BREEZE
SEPT 19	10.8	10.7	AM-NE, FOG, HG OVERCAST PM-RAIN
SEPT 20	12.5	15.0	HEAVY RAIN, SE
SEPT 21	15.2	15.0	AM-FOG, CALM PM-SUN, HOT, NW
SEPT 22	14.7	14.3	AM-FOG PM-SUN, LIGHT SE
SEPT 23	13.9	13.5	AM-FOG, LIGHT NE PM-SUN, CALM
SEPT 24	13.0	12.7	CLEAR, SUN, LIGHT RAIN, LIGHT SE
SEPT 25	12.4	12.2	SE, CLOUD, LIGHT RAIN
SEPT 26	11.9	11.7	HIGH OVERCAST, AM-LIGHT NE PM-LIGHT W
SEPT 27	11.3	11.1	HG OVERCAST, CALM PM-LIGHT RAIN, W
SEPT 28			RAIN
SEPT 29		10.6	AM-NE, FOG PM-SUN/HOT, NE
SEPT 30	10.5	10.5	AM-LOW FOG PM-SUN, CALM
OCT 01	10.4	10.4	CLEAR, LIGHT NE PM-NE 10-15
OCT 02	10.6	10.7	AM-CLD/LT RAIN, CALM PM-HVY RAIN/CLD, LT SE
OCT 03	11.4		85% CLOUD, HEAVY RAIN
OCT 04			DAWSONS- HEAVY RAIN, SE 25
OCT 05		11.5	AM-CLEAR PM-SUN/HOT, LIGHT SE
OCT 06	11.3	11.0	AM-FOG, CALM, COOL PM-SUN/HOT, CALM
OCT 07	10.9	10.6	AM-FOG, LIGHT NE PM-CLEAR, SUN, LT NE
OCT 08	10.4	10.2	CLEAR, SUN, LIGHT NE
OCT 09	10.0	9.9	CLEAR, SUN, LIGHT NE
OCT 10	9.7	9.6	CLEAR, LIGHT NE PM-CALM
OCT 11	9.4	9.3	CLEAR, SUN, LIGHT NE
OCT 12	9.2	9.0	CLEAR, HEAVY WIND PM-SUN, CALM
OCT 13	9.9	8.8	70% HG OVERCAST, CALM PM-BREEZE
OCT 14	8.7	8.6	20% HG OVERCAST, CALM PM-SE, SHOWERS
OCT 15	8.5		RAIN, CALM

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1986

DATE	LEVEL (FT) AM	PM	COMMENTS
SEPT 04	12.5	12.4	
SEPT 05	12.4	12.2	
SEPT 06	12.1	12.0	
SEPT 07	12.0	11.9	
SEPT 08	11.9	11.8	
SEPT 09	11.7	11.5	
SEPT 10	11.4	11.2	
SEPT 11	11.1	10.9	
SEPT 12	10.8	10.5	
SEPT 13	10.2	10.1	
SEPT 14	9.9	N.R.	
SEPT 15	N.R.	N.R.	
SEPT 16	9.4	9.3	
SEPT 17	9.3	9.2	
SEPT 18	9.0	9.0	
SEPT 19	8.9	8.9	
SEPT 20	8.8	8.8	
SEPT 21	8.7	8.7	
SEPT 22	8.6	8.7	
SEPT 23	9.0	9.7	
SEPT 24	10.0	10.0	
SEPT 25	10.0	10.0	
SEPT 26	9.8	9.7	
SEPT 27	9.6	9.3	
SEPT 28	9.2	N.R.	
SEPT 29	N.R.	N.R.	
SEPT 30	N.R.	N.R.	
OCT 01	9.7	9.5	
OCT 02	9.4	N.R.	
OCT 03	9.4	9.5	
OCT 04	9.7	N.R.	
OCT 05	N.R.	N.R.	
OCT 06	N.R.	10.3	
OCT 07	10.4	10.5	
OCT 08	10.4	10.3	
OCT 09	10.2	10.0	

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1986 (cont.)

DATE	LEVEL (FT) AM	PM	COMMENTS
OCT 10	9.8	9.7	
OCT 11	9.6	9.5	
OCT 12	9.4	9.2	
OCT 13	9.2	9.1	
OCT 14	9.0	9.0	
OCT 15	8.9	8.8	
OCT 16	8.8	8.7	
OCT 17	8.7	8.7	
OCT 18	8.5	8.5	
OCT 19	8.4	8.3	
OCT 20	8.3	8.1	
OCT 21	8.1		

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1985

DATE	LEVEL (FT) AM	PM	COMMENTS
SEPT 03	9.8	9.8	SUN WITH CLOUD
SEPT 04	9.9	10.1	RAIN
SEPT 05	10.6	10.8	
SEPT 06	10.8	10.7	
SEPT 07	10.4	10.2	N.E. 40-45
SEPT 08	10.0		AM-N.E. 10-15; PM- 25
SEPT 10		9.4	SUN, WESTERLY
SEPT 11		9.4	LIGHT RAIN
SEPT 12	9.5	9.4	
SEPT 13	9.3	9.3	
SEPT 14	9.3		
SEPT 15		9.2	
SEPT 16	9.3	9.4	SOME HEAVY RAIN
SEPT 17	9.5		
SEPT 19	9.3		
SEPT 21	9.4		
SEPT 23	9.2		
SEPT 24	9.0	9.0	
SEPT 25	9.0	9.0	
SEPT 26	9.0	9.0	
SEPT 29		8.6	
SEPT 30	8.6		
OCT 02	8.7		
OCT 05	9.6		
OCT 06	8.4		
OCT 07	8.3		
OCT 09	8.0		
OCT 10	8.3	8.5	
OCT 11	8.8	8.9	
OCT 12	9.0		
OCT 14		11.2	
OCT 15	13.5	16.0	
OCT 16	16.0		
OCT 17	15.6		

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1984

DATE	LEVEL (FT) AM	PM	COMMENTS
SEPT 02	10.9		SUNNY
SEPT 03	10.6		RAIN
SEPT 04	10.5		HEAVY RAIN
SEPT 05	11.0		SUN & RAIN
SEPT 06	11.5		SUNNY
SEPT 07	11.0		RAIN
SEPT 08	11.0		RAIN
SEPT 09	11.1		RAIN
SEPT 10	11.6		RAIN
SEPT 11	11.4		RAIN
SEPT 12	11.0		LIGHT RAIN
SEPT 13	10.9		SUNNY
SEPT 14	10.5		CLOUDY
SEPT 15			RAIN
SEPT 16	10.4	10.9	HEAVY RAIN
SEPT 17	15.4	16.2	HEAVY RAIN
SEPT 18	16.7	16.4	SUNNY
SEPT 19	15.9	15.5	SUNNY
SEPT 20	14.6	14.2	SUNNY
SEPT 21	13.5		SUNNY
SEPT 22	12.6		SUNNY
SEPT 23			SUNNY
SEPT 24	11.0		SUNNY
SEPT 25	10.6		SUNNY
SEPT 26	10.2		SUNNY
SEPT 27	9.8		SUNNY
SEPT 28			SUNNY
SEPT 29			SUNNY
SEPT 30	9.0		SUNNY
OCT 01	8.9		RAIN
OCT 02	9.2		RAIN
OCT 03	9.8		RAIN
OCT 04	10.2		HEAVY RAIN
OCT 05	11.3		CLOUD
OCT 06			RAIN
OCT 07	13.0	14.8	HEAVY RAIN; NOON-13.2
OCT 08	17.1		HEAVY RAIN
OCT 09	18.0	19.0	HEAVY RAIN
OCT 10	18.0		RAIN & COLD; SNOW ON MOUNTAINS
OCT 11	18.0		RAIN & COLD
OCT 12	14.2		RAIN
OCT 13	14.2		RAIN & COLD
OCT 14	13.9		COLD & CLEAR
OCT 15	13.0		SOME RAIN & CLEAR
OCT 16	12.0		VERY COLD & CLEAR

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1983

DATE	LEVEL (FT) AM	PM	COMMENTS
SEPT 01	10.9		LIGHT RAIN
SEPT 02	11.0		STEADY RAIN
SEPT 03			RAIN, CLEAR PM
SEPT 04	11.7		SHOWERS
SEPT 05	11.6	11.5	AM-SOME RAIN; PM-HEAVY RAIN
SEPT 06	12.2	13.0	AM-RAIN; PM-CLEARING
SEPT 07	13.4	13.2	
SEPT 08			SUNNY
SEPT 09			SUNNY
SEPT 10	11.0		RAIN
SEPT 11	10.8		LIGHT RAIN
SEPT 12	10.7		LIGHT RAIN
SEPT 13	10.7		HEAVY RAIN
SEPT 14	11.0		AM-FOG; PM-SUN & CLEAR
SEPT 15	11.0		HEAVY RAIN
SEPT 16			HEAVY RAIN
SEPT 18			SUNSHINE
SEPT 19			SUN & CLOUD
SEPT 20			CLEAR- SUN & HOT, LAKE IS LOW
SEPT 21	9.5		SUN & CLEAR
SEPT 22	9.6		SUN & CLEAR
SEPT 23	9.5		AM-SUN; PM-CLOUD
SEPT 24	9.6		LIGHT RAIN
SEPT 25	9.6		HEAVY RAIN
SEPT 26	10.0		SUN & RAIN SHOWERS
SEPT 27	10.5	10.4	CLEAR, SOME CLOUD
SEPT 29	9.8		SUNNY
SEPT 30			SUNNY & CLEAR
OCT 01	9.2		SUNNY
OCT 02	9.0		CLOUD & RAIN
OCT 05	9.0		
OCT 09	8.5		RAIN
OCT 10	8.4		SUN & CLEAR
OCT 11	8.3		SUN & CLEAR
OCT 12	8.2		SUN & CLEAR
OCT 13	8.1		COLD, SUN & CLEAR
OCT 14	8.7		COLD, SUN & CLEAR
OCT 15	7.9		COLD, SUN & CLEAR
OCT 16	7.9	8.0	RAIN

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1983 (cont.)

DATE	LEVEL (FT) AM	PM	COMMENTS
OCT 17	8.2		SUN & CLEAR
OCT 18	8.3		RAIN & WIND
OCT 19	8.6		RAIN & WIND
OCT 20	8.9		CLOUD, SNOW ON HILLS
OCT 21	8.9	9.2	RAIN
OCT 22	10.2		RAIN
OCT 23	10.4	10.3	SNOW ON MOUNTAINS
OCT 24	10.2		RAIN
OCT 25	10.4	11.2	RAIN
OCT 26	12.5	13.0	HEAVY RAIN
OCT 27	12.9		MISTY

DAILY RECORD OF LAKE LEVEL AT GENESEE RIVER CAMP, 1982

DATE	LEVEL (FT) AM	PM	COMMENTS
SEPT 03		11.6	
SEPT 04	11.8		
SEPT 05		11.8	
SEPT 06	12.1	13.4	WATER HIGH AND RISING
SEPT 07	14.7	17.5	HEAVY RAIN ALL DAY
SEPT 08	19.1	20.7	HEAVY RAIN, WATER HIGH
SEPT 09	22.1	21.0	WEATHER CLEARING, SNOW ON HILLS, WATER HIGH
SEPT 10	19.5		LIGHT RAIN
SEPT 11	18.2	17.0	HEAVY RAIN IN PM
SEPT 12	16.3	15.6	SUNNY, CLEAR
SEPT 13	14.7	14.0	SUNNY, CLEAR
SEPT 14	13.4	12.7	SUNNY, CLEAR
SEPT 15		12.0	
SEPT 16	11.9	11.7	SUNNY, CLEAR
SEPT 17	11.6	11.5	SUNNY, CLEAR
SEPT 18	11.5	11.4	SUNNY, CLEAR
SEPT 19	11.4	11.4	SUNNY
SEPT 20	11.3	11.3	SUNNY
SEPT 21	11.2	11.2	CLOUDY
SEPT 22	11.2	11.0	SUNNY
SEPT 23	10.9	10.9	SUNNY
SEPT 24	10.8	10.6	CLOUDY WITH RAINY PERIODS
SEPT 25	10.5	10.5	RAIN
SEPT 26	10.4	10.3	SUNNY
SEPT 27	10.2	10.1	SUN WITH CLOUD, WINDY
SEPT 28			
SEPT 29			
SEPT 30	9.4	9.3	
OCT 01		9.2	
OCT 02	9.3		
OCT 03	9.1	9.1	
OCT 04	9.0		
OCT 05	9.2		RAIN
OCT 06		9.6	RAIN
OCT 07	9.4		SUNNY AND COLD
OCT 08	9.3		
OCT 09		9.4	

PART IV

The following tables show the stream escapement by age class and year. Individual stream escapement numbers are only reported for those streams sampled for age data. The escapements to the remaining streams in the Owikeno Lake system have been grouped under the heading "Other Streams". The total percentage by ageclass represents the estimated total number of fish of that age in the lake system. This value was determined from the sum of the estimated number of fish in each age class divided by the total sockeye escapement to age-sampled streams. Age data was unavailable for the years 1976, 1977 and 1982.

1987 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			17	2890	83	14110			17000
ASHLULM			7	2240	93	29760			32000
DALLERY			7	1591	30	6364			21500
INZIANA			4	1792	96	43008			44800
NEECHANZ			29	10730	71	26270			37000
SHEEMAHANT			7	7000	93	93000			100000
TZEO			2	242	93	9723			10500
WASHWASH			1	547	99	54153			54700
TOTAL	0		9		87		0		317500
TOTAL OTHER STREAMS									204200
1987 OWIKENO ESCAPEMENT									521700

1986 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			18	7875	83	37125			45000
ASHLULM			15	6935	85	40565			47500
DALLERY			25	7350	76	22650			30000
GENESEE			15	4590	85	25410			30000
INZIANA			30	14203	70	33298			47500
NEECHANZ			27	14310	73	38690			53000
SHEEMAHANT			14	44525	86	280475			325000
TZEO			11	1050	90	8950			10000
WASHWASH			18	5490	82	24510			30000
TOTAL	0		17		83		0		618000
TOTAL OTHER STREAMS									207500
1986 OWIKENO ESCAPEMENT									825500

1985 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
ASHLULM			39	20280	60	31200	1	520	52000
GENESEE			30	9265	70	22035			31300
INZIANA			7	1471	93	18954			20425
NEECHANZ			16	5656	84	30144			35800
SHEEMAHANT			24	31995	76	103005			135000
TZEO			11	1100	89	8900			10000
WASHWASH			11	11000	89	89000			100000
TOTAL	0		21		79		0		384525
TOTAL OTHER STREAMS									115700
1985 OWIKENO ESCAPEMENT									500225

1984 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			62	15734	38	9767			25500
DALLERY			53	11660	47	10340			22000
GENESEE			88	20125	13	2875			23000
WASHWASH			49	14550	52	15450			30000
TOTAL	0		62		38		0		100500
TOTAL OTHER STREAMS									113800
1984 OWIKENO ESCAPEMENT									214300

1983 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
GENESEE			19	4650	81	20350			25000
NEECHANZ			12	6100	88	43900			50000
OWIKENO LAKE			18		82				
WASHWASH	1	300	29	8760	66	19680	4	1230	30000
TOTAL	0		19		80		1		105000
TOTAL OTHER STREAMS									531500
1983 OWIKENO ESCAPEMENT									636500

1981 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			33	58500	68	121500			180000
ASHLULM			31	7675	68	17050	1	250	25000
DALLERY			59	23760	41	16240			40000
GENESEE	1	75	19	2880	80	11970	1	75	15000
INZIANA			17	3096	81	14526	2	378	18000
NEECHANZ			19	7400	81	32400	1	200	40000
TZEO			20	1000	80	4000			5000
WASHWASH			47	23300	52	26150	1	500	50000
TOTAL	0		34		65		0		373000
TOTAL OTHER STREAMS									380000
1981 OWIKENO ESCAPEMENT									753000

1980 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			25	18975	75	56025			75000
ASHLULM			20	1000	80	4000			5000
DALLERY			12	3050	87	21825			25000
GENESEE			51	2273	50	2228			4500
INZIANA			2	450	98	22050			22500
NEECHANZ			5	1690	95	30810			32500
SHEEMAHANT			16	9882	84	51118			61000
WASHWASH			18	2390	82	11043			13500
WHISKEY			2		98				
TOTAL	0		17		83		0		239000
TOTAL OTHER STREAMS									74000
1980 OWIKENO ESCAPEMENT									313000

1979 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			54	24345	46	20655			45000
ASHLULM			67	5336	33	2664			8000
DALLERY	1	150	57	8550	42	6300			15000
GENESEE			80	3980	29	1430			5000
INZIANA			56	12623	41	9113	3	765	22500
SUNDAY			42		58				
TZEO			80	1600	16	320	4	80	2000
WASHWASH			53	7980	40	5955	7	1065	15000
WHISKEY			82		16		2		
TOTAL	0		57		41		2		112500
TOTAL OTHER STREAMS									185000
1979 OWIKENO ESCAPEMENT									297500

1978 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK	4	1075	4	875	90	22400	3	650	25000
ASHLULM			7	1553	91	20430	2	518	22500
DALLERY	1	180	8	1125	87	13050	4	645	15000
GENESEE	1	35	1	70	95	4750	3	140	5000
INZIANA			1	163	95	30778	5	1560	32500
NEECHANZ			2	378	98	17622			18000
SHEEMAHANT			3	3750	98	146250			150000
SUNDAY			3		90		8		
TZEO			2	210	96	9580	2	210	10000
WASHWASH	1	325	2	1365	93	60580	4	2730	65000
WHISKEY			3		93		4		
TOTAL	0		3		95		2		343000
TOTAL OTHER STREAMS									40000
1978 OWIKENO ESCAPEMENT									383000

1975 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			66	36080	34	18920			55000
ASHLULM			40	1809	60	2691			4500
DALLERY			42	18720	58	26280			45000
GENESEE			87	12644	13	1856			14500
INZIANA			29	8820	71	21180			30000
NEECHANZ			30	13455	69	31095	1	450	45000
SHMHT NARROWS			98		3				
SHEEMAHANT			59	20580	39	13720	2	700	35000
SUNDAY			82		17		1		
THIRD NARROWS			84		16				
TZEO			19	2046	81	8954			11000
WASHWASH			47	19975	52	22100	1	425	42500
WHISKEY			85		15				
TOTAL	0		47		52		1		282500
TOTAL OTHER STREAMS									197500
1975 OWIKENO ESCAPEMENT									480000

1974 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK	7	6800	18	18200	75	75000			100000
GENESEE	3	480	25	3795	71	10575	1	150	15000
INZIANA			75	30000	25	10000			40000
NEECHANZ			11	4905	89	40095			45000
SHEEMAHANT	2	3025	6	8800	91	125675			137500
WANNOCK	2	1375	34	21500	62	38875	1	688	62500
WASHWASH			4	3225	91	68475	4	3225	75000
TOTAL	2		19		78		1		475000
TOTAL OTHER STREAMS									82000
1974 OWIKENO ESCAPEMENT									557000

1973 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			12	7750	87	54125	1	625	62500
ASHLULM			3	880	97	26620			27500
DALLERY			20	4590	80	17910			22500
GENESEE			14	6075	87	38925			45000
INZIANA			2	3575	98	158925			162500
MACHMELL			9	1100	91	11400			12500
MARBLE			18		82				
NEECHANZ			6	3050	94	46950			50000
SHEEMAHANT			9	21750	91	228250			250000
SUNDAY			2		98				
TZEO			6		94				
WASHWASH					99	197800	1	2200	200000
TOTAL	0		6		94		0		832500
TOTAL OTHER STREAMS									152500
1973 OWIKENO ESCAPEMENT									985000

1972 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK	6	2363	85	31838	9	3338			37500
DALLERY	2	189	64	5742	32	2871	2	189	9000
GENESEE	11	3025	68	18728	21	5748			27500
INZIANA	18	267	64	966	11	167	7	101	1500
NEECHANZ	10	309	66	1965	10	309	14	414	3000
SHEEMAHANT			100	30000					30000
WANNOCK	3	2320	90	71920	7	5760			80000
WASHWASH	1	225	43	9653	54	12218	2	473	22500
TOTAL	4		81		14		1		211000
TOTAL OTHER STREAMS									10500
1972 OWIKENO ESCAPEMENT									221500

1971 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK			89	48895	11	6105			55000
ASHLUM			27	350	73	950			1300
DALLERY			72	14460	27	5320	1	220	20000
GENESEE			80	44000	15	8250	5	2750	55000
WANNOCK			63	37860	37	22140			60000
TOTAL	0		76		22		2		191300
TOTAL OTHER STREAMS									24600
1971 OWIKENO ESCAPEMENT									215900

1970 OWIKENO LAKE ESCAPEMENTS BY AGE CLASS

STREAM	%AGE 3	EST. # AGE 3	% AGE 4	EST. # AGE 4	%AGE 5	EST. # AGE 5	%AGE 6	EST. # AGE 6	TOTAL ESCAPEMENT
AMBACK	1	210	22	3360	70	10485	6	945	15000
DALLERY	1	165	4	645	86	12900	9	1290	15000
GENESEE	29	2198	33	2445	32	2363	7	488	7500
INZIANA			15	228	73	1091	12	182	1500
WANNOCK	1	490	65	22610	34	11900			35000
WASHWASH	20	707	49	1729	11	389	19	669	3500
TOTAL	5		40		50		5		77500
TOTAL OTHER STREAMS									24750
1970 OWIKENO ESCAPEMENT									102250

APPENDIX I. OWIKENO LAKE SOCKEYE ESCAPEMENT 1970-87.

OWIKENO LAKE SOCKEYE ESCAPEMENT FOR 1970-1979

STREAM	TARGET ESC.	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	AVERAGE 1970-1979
AMBACK CREEK	100000	15000	55000	37500	62500	100000	55000	65000	32500	25000	45000	49250
ASHLULM CREEK	40000	750	1300	1500	27500	9000	4500	4000	3000	22500	8000	8205
DALLERY CREEK	90000	15000	20000	9000	22500	22500	45000	12000	18000	15000	15000	19400
GENESEE CREEK	25000	7500	55000	27500	45000	15000	14500	2500	600	5000	5000	17760
INZIANA RIVER	75000	1500	3500	1500	162500	40000	30000	25000	6000	32500	22500	32500
MACHMELL RIVER*	50000	N/O	N/O	2500	12500	10000	7500	7000	2000	15000	35000	11438
NEECHANZ RIVER	50000	15000	4000	3000	50000	45000	45000	25000	8000	18000	42500	25550
OWIKENO LAKE SPWNS**	30000	N/R	N/R	5000	10000	8000	102500	20000	10000	5000	7500	21000
SHEEMAHANT RIVER	200000	7500	6000	30000	250000	137500	35000	20000	27500	150000	65000	72850
TZEO RIVER	50000	1500	1100	1500	55000	32500	11000	12000	4000	10000	2000	13060
WANNOCK R & FL	200000	35000	60000	80000	87500	62500	87500	87500	45000	20000	35000	60000
WASHWASH CREEK	100000	3500	10000	22500	200000	75000	42500	20000	35000	65000	15000	48850
TOTAL	1010000	102250	215900	221500	985000	557000	480000	300000	191600	383000	297500	373375

* INCLUDES MARBLE CREEK
**INCLUDES: SHEEMAHANT FLATS, LAKESHORE, SUNDAY & WHISKEY CRKS, AND 3RD NARROWS

OWIKENO LAKE SOCKEYE ESCAPEMENT FOR 1980-1986

STREAM	TARGET ESC.	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	AVERAGE 1980-1989
AMBACK CREEK	100000	75000	180000	90000	50000	25500	52000	45000	17000			66813
ASHLULM CREEK	40000	5000	25000	15000	35000	7000	28700	47500	32000			24400
DALLERY CREEK	90000	25000	40000	60000	37500	22000	37000	30000	21500			34125
GENESEE CREEK	25000	4500	15000	8000	25000	23000	31300	30000	200			17125
INZIANA RIVER	75000	22500	18000	40000	33000	17700	20425	47500	44800			30491
MACHMELL RIVER*	50000	17500	20000	80000	37000	5000	10000	5000	1500			22000
NEECHANZ RIVER	50000	32500	40000	50000	50000	11000	35800	53000	37000			38663
OWIKENO LAKE SPWNS**	30000	25000	10000	15000	10000	1100	20000	2500	2500			10763
SHEEMAHANT RIVER	200000	61000	200000	150000	125000	25000	135000	325000	100000			140125
TZEO RIVER	50000	4000	5000	55000	4000	2000	10000	10000	10500			12563
WANNOCK R & FL	200000	27500	150000	150000	200000	45000	20000	200000	200000			124063
WASHWASH CREEK	100000	13500	50000	110000	30000	30000	100000	30000	54700			52275
TOTAL	1010000	313000	753000	823000	636500	214300	500225	825500	521700			573403

* INCLUDES MARBLE CREEK
**INCLUDES: SHEEMAHANT FLATS, LAKESHORE, SUNDAY & WHISKEY CRKS, AND 3RD NARROWS

APPENDIX II. Alternate Stream Names.

Stream Names

Names	Alternate Names	
Amback	Ambach	Quap
Ashlulm	Asklum	
Dallery	Dallec	
Genesee		
Inziana	Indian	
Machmell	Markwell	
Neechanz	Neechantz	Nookins
Sheemahant	Shumahant	
Sheemahant Flats	Second Narrows	
Sunday		
Third Narrows		
Tzeo	Cheo	
Wannock		
Washwash	Walkwash	Waukwash
Whiskey	Whisky	

APPENDIX III. Abbreviations used in survey summary tables.

Survey Method-

F	Float
HLCPTR	Helicopter
JTBT	Jetboat
SMKCFT	Smokercraft
W	Walk

Estimated Number of Sockeye-

PRES.	Present
UNK	Unknown

Water Conditions-

EXLNT	Excellent
EXT. LOW	Extremely Low
GLCL Silt	Glacial Silt
NORM.	Normal
Sl. Tur.	Slightly Turbid

Comments-

CRK	Creek
EST.	Estimate
GN	Gillnet
MOD.	Moderate
N.O., N/O	None observed
N.R.	Not recorded
SN	Seine
TST SETS	Test Sets
TTD	Total to Date
VIS.	Visibility

SX	Sockeye
CO	Coho
PK	Pink
CM	Chum
CK	Chinook
STHD	Steelhead
DV	Dolly Varden
CTHT	Cutthroat Trout
M,F	Male, Female